

Department of Public Health & Primary Care
Trinity College Dublin

A National Survey of Chronic Disease Management by Irish Hospital based Consultants

Catherine Darker, Colm Bergin, Gillian Walsh, Brendan O'Shea



COLÁISTE NA TRÍONÓIDE, BAILE ÁTHA CLIATH
Ollscoil Átha Cliath

TRINITY COLLEGE DUBLIN
The University of Dublin



ROYAL COLLEGE OF
PHYSICIANS OF IRELAND

THE ADELAIDE



HOSPITAL SOCIETY

Acknowledgements

This report is unique in reflecting a partnership between the Adelaide Health Policy Initiative which is based within the Trinity College Department of Public Health and Primary Care, and The Royal College of Physicians of Ireland. We wish to formally and gratefully acknowledge the positive and supportive attitude of the Royal College. The College's input and support strengthen the report and, in turn, we hope that it will serve to enhance the College's role as an advocate of better patient care.

We wish to thank the Hospital Consultants who generously gave of their time to complete and return the questionnaire. Without them this research would not have been possible.

We would like to thank the family of Séan O'Neill, who lost his battle with COPD earlier this year, for their donation to the publication of this research.

Professor Ian M Graham FRCPI, FESC, FTCD

Chair, Adelaide Health Policy Initiative

Sub-editing: Deirdre Handy

Design: Janine Handy



A National Survey of Chronic Disease Management by Irish Hospital based Consultants

Catherine Darker, Colm Bergin, Gillian Walsh, Brendan O'Shea

Foreword

Over 100,000,000 EU citizens currently suffer from chronic disease, making it the most important disease burden in Europe. Based on current projections, the burden of chronic conditions is expected to increase dramatically in Ireland over the next number of years. By 2020 it is anticipated that the number of adults in Ireland with chronic conditions will increase by around 40% and that relatively more of the burden of these conditions will be borne by older adults.

The healthcare, financial and social impact of chronic diseases is steadily on the rise and it is therefore incumbent on us as a society to invest appropriate time and resources in planning how to tackle this issue.

Tackling chronic diseases at the system level has been the focus of many publications. In the US, the Institute of Medicine Report – Crossing the Quality Chasm – focused on the need to reorganise care delivery to meet the healthcare needs of populations of patients who suffer from chronic illnesses. In October 2001, the British Medical Journal and the Western Journal of Medicine both published special issues focusing on the problem of chronic diseases and highlighted how various nations are dealing with this growing epidemic. We also have our own publications, which have also looked at this important area.

It is therefore timely for the publication of this important report to identify what elements of the Chronic Care Model are currently in place. This will provide a baseline measure of Chronic Disease Management for benchmarking against ongoing transformation in the future.

Meeting the complex needs of patients with chronic diseases is the single greatest challenge facing our healthcare system today.

With the increasing numbers of patients with chronic diseases, it is imperative that clinicians, healthcare administrators and health policy makers plan and ensure that the healthcare delivery system is configured to provide care for these patients across the continuum of their healthcare needs. The Clinical Programmes have an important role in developing a blueprint for how such services should be provided and this report will help advise that process.

Dr Áine Carroll

National Director of Clinical Strategy and Programmes

Research Group

Dr Catherine Darker, Adelaide Assistant Professor in Health Services Research, Trinity College Dublin

Ms Gillian Walsh, Researcher, Royal College of Physicians of Ireland

Dr Ann O'Shaughnessy, Head of Education, Royal College of Physicians of Ireland

Prof Pat Manning, National Clinical Lead, Asthma Clinical Programme

Prof Tim McDonnell, National Clinical Lead, COPD Clinical Programme

Dr Kieran Daly, National Clinical Lead, Acute Coronary Syndrome Clinical Programme

Prof Kenneth McDonald, National Clinical Lead, Heart Failure Clinical Programme

Dr Peter Kelly, Joint National Clinical Lead, Stroke Clinical Programme

Dr Joe Harbison, Joint National Clinical Lead, Stroke Clinical Programme

Dr Diarmuid Smith, Clinical Lead, Diabetes Clinical Programme

Dr Diarmuid O'Shea, Clinical Lead, Care of the Elderly Clinical Programme

Dr Áine Carroll, National Director of Clinical Strategy and Programmes

Prof Colm Bergin, Consultant Physician in Infectious Diseases, St. James' Hospital and Trinity College Dublin; Dean of Postgraduate Training, RCPI

Dr Brendan O'Shea, Clinical Lecturer in Primary Care, Trinity College Dublin

Table of Contents

List of Tables	7
List of Figures	8
Summary	9
Introduction	11
Section One: Rationale, Aims And Objectives	12
1.1 Rationale	
1.2 Aim of Research	
Section Two: Method	14
2.1 Design	
2.2 Sampling	
2.3 Survey Instrument	
2.4 Procedure	
2.5 Analysis	
Section Three: Results	16
3.1 Response rate	
3.2 Respondents' profile	
3.2.1 Clinical Specialty	
3.2.2 Age of respondents	
3.2.3 Gender of respondents	
3.2.4 Service location	
3.2.5 Clinical service description	
3.3 Perception of chronic disease management	
3.4 Access	
3.5 Evidence of managed care	
3.6 Resources	
3.7 Information technology	
3.8 Barriers to effective chronic disease management	
3.9 Future development of chronic disease management	
Section Four: Discussion	44
References	47
Appendix: Survey Instrument	48

List of Tables

Table 1:	Responders according to clinical specialty.
Table 2:	Age, gender, location and description of service.
Table 3:	Comparison between Consultants' and GPs' perception of chronic disease management in the Irish healthcare system.
Table 4:	Consultants and GPs perception of how often fee-paying patients experience difficulties in accessing services and paying for medical costs.
Table 5:	Consultants perception of how often their public patients experience difficulties in accessing services and paying for medical costs.
Table 6:	Hospital Consultants' opinion of content and timeliness of referral letters from General Practitioners for private patients.
Table 7:	Hospital Consultants' opinion of content and timeliness of referral letters from General Practitioners for public patients.
Table 8:	Hospital Consultants' versus GPs' perception of effective local access to services for both private fee paying and public patients.
Table 9:	Number of Hospital Consultants who routinely use written, evidence-based treatment guidelines, for common conditions (N=223; 98.2%).
Table 10:	Frequency of advice to patients on risk factors relating to their condition (N=223; 98.2%).
Table 11:	Frequency of advice to family members of patients concerning risk factors (N=223; 98.2%).
Table 12:	Frequency of use of strategies to improve care for patients with chronic diseases.
Table 13:	The types of healthcare providers, ranked in order of most frequent to less frequent, within respondents' services (N=223; 98.2%).
Table 14:	Strength of agreement on levels of resources for chronic disease management.
Table 15:	Severity of problems relating to shortages of Hospital Consultant colleagues and time spent on coordination of care.
Table 16:	The use of technology within services.
Table 17:	The ease with which respondents can generate patient information using their current medical records system.
Table 18:	Tasks that are routinely performed within the service.
Table 19:	Perceived importance of barriers to effective management of chronic diseases within your service.
Table 20:	Rating of resources in terms of importance in the development of chronic disease management within the service.
Table 21:	Hospital Consultants' opinion of shared care between General Practice and hospitals.
Table 22:	Opinion of Shared Care of those Hospital Consultants currently involved in Shared Care with GPs.

List of Figures

- Figure 1 Hospital Consultants' perception of Chronic Disease Management in the Irish healthcare system
- Figure 2 Provision of out-of-hours service for patients
- Figure 3 Provision of a written list of instructions for patients taking multiple medications
- Figure 4 Provision of a written list of instructions for patients with a chronic disease about how to manage their own care at home
- Figure 5 Numbers of Hospital Consultants who had completed a Full Audit Cycle within the last 5 years
- Figure 6 Perception of how well service is integrated with local GP practices
- Figure 7 Numbers of Hospital Consultants who use electronic patient medical records in their service
- Figure 8 Numbers of Hospital Consultants whose service communicates with patients by email
- Figure 9 Numbers of Hospital Consultants whose service communicates with patients by SMS text

Summary

Irish healthcare and services are undergoing radical transformation, including the establishment and implementation of over thirty Clinical Care Programmes that aim to deliver innovative solutions to improve patient outcomes and deliver integrated care.

This current study provides a baseline description of the current provision of chronic disease management (CDM) in Irish hospital services, prior to introduction of changes such as the establishment of Hospital Groups.

It captures the insight of front line Hospital Consultants working in Irish healthcare and allows comparisons with previously published views of General Practitioners.

Those surveyed were Hospital Consultants registered as Members and Fellows at The Royal College of Physicians in Ireland; it is known that not all Consultants are on the College register¹. The response rate was 66%.

81% of Hospital Consultant respondents believe that there are good things in our health system, but significant changes are needed to facilitate the management of chronic disease care.

63% of Hospital Consultant respondents indicated that they do not routinely use electronic patient medical records in their practice, which places the Irish system at a disadvantage in delivering effective CDM, as good information technology systems are internationally recognised as a cornerstone of modern quality healthcare delivery. IT will not only improve care delivery within hospitals but will also enhance communication across care systems.

Only a quarter of Hospital Consultant respondents use a register to identify and track patient care and to remind patients about appointments.

There is a need for improved communication between Hospital Consultants and GPs with the majority of Consultant respondents indicating that they sometimes or rarely receive all relevant information within a referral letter.

The inequitable two-tiered system within the Irish healthcare system remains an issue. Hospital Consultant respondents (and GPs previously surveyed) state that their public patients often have difficulty in getting access to specialised diagnostic tests, experience long waiting times for treatment and have difficulty paying for medications or other out of pocket expenses.

Nearly all Hospital Consultant respondents indicated that they provide an out-of-hours service to their patients, with the majority indicating that they provide an onsite on-call service.

Two thirds of Hospital Consultant respondents reported regularly using evidence based guidelines for the treatment of conditions that they deal with within their service.

97% of Hospital Consultant respondents welcomed the concept of shared care in CDM between General Practice and Hospitals.

Hospital Consultant respondents are well disposed to the delivery of CDM by Nurses working with Hospital Consultant or GP supervision in the Community, but are currently against the service being delivered independently by Nurses.

Barriers to effective CDM were identified as a lack of effective communication between Primary Care and Secondary Care, lack of appropriate funding for chronic disease management, administrative workload, and a lack of time.

An agreed, effective, regional model of co-operation between hospitals and primary care, should be designed by the Colleges (RCPI and ICGP), focusing on the evolving needs of patients, and suitable for use at local and regional levels. Cross speciality postgraduate training programmes should be implemented in a collaborative process led by the Colleges.

Introduction

Healthcare and health services are undergoing a transformation. The Programme for Government entitled 'Towards Recovery, Programme for a National Government 2011-2016'² has committed to ending the "unfair, unequal and inefficient two-tier health system" by introducing universal health insurance (UHI). UHI as outlined in "Future Health – A Strategic Framework for the Reform of the Health Service 2012-2015"³ is a mechanism to transform the Irish health system into a single-tiered health system characterised by a mandatory universal health insurance (UHI), equity of access to healthcare services determined by need rather than money, risk equalisation, chronic disease management in the community and a system of hospital funding whereby money follows the patient (MFTP). Since 2010, in partnership with the Health Service Executive and the Royal College of Physicians of Ireland, over thirty Clinical Care Programmes have been established with the aim of improving quality of care and access to services and driving cost effectiveness.

A requirement that arises when a country or large system is on the precipice of huge change is to establish the readiness of that system to deliver the changes within the current context. Consideration must also be given to the projected demographic changes within the country. Chronic diseases, such as heart disease, chronic respiratory disease and diabetes, are categorised by the World Health Organization as diseases of long duration and generally slow progression⁴. Chronic diseases cause significant morbidity and mortality, and result in poorer quality of life for many people⁵. It has been estimated that 70% of the global disease burden in 2030 will be due to chronic diseases, with an increasing number of individuals having multiple chronic conditions in their lifetime⁶.

Ireland has recently undergone an unprecedented economic contraction and funding for the primary and secondary care sectors has constricted, and demand on all services has increased, with associated increase in administrative and legislative requirements. Demand is driven by increasing patient need, and by a constant pressure originating from sustained efforts to move workload from the hospital to the community. Patient expectations are also higher.

Evidence is emerging that chronic disease interventions could contribute to strengthening the capacity of health systems to deliver a comprehensive range of integrated services — provided that they are planned to include this objective⁶. Because effective chronic disease programmes are highly dependent on well-functioning national health systems, the effectiveness of chronic disease management programmes could be a litmus test for health-systems strengthening, and help measure the impact of reform within our health services here in Ireland.

We believe that in this context, it is most important to understand the beliefs, experiences and attitudes of front line clinical staff, most particularly primary care general practitioners and secondary care hospital consultants, as well as nursing staff and patients themselves.

This study is therefore timely. It includes a representative survey of front line Hospital Consultants, who are deeply familiar with the challenges faced by their patients, and who have valuable insights that must be made known and understood by policy makers, administrators, political leaders and patients.

Section One:

Rationale, Aims and Objectives

1.1 Rationale

The Irish healthcare system is undergoing significant change — consequent on new thinking, new policy directions and a realisation that in an era where resources are contracting severely and disease patterns are changing, there needs to be a new approach to healthcare and increased research support to inform the choices we as a society are making. The new Programme for Government² outlines a thorough transformation of the Irish health system from a two-tier service reliant on taxation to a universal healthcare system with compulsory health insurance. Concurrently, Ireland has a rapidly ageing population⁷. It is estimated that over the next 30 years the number of patients over the age of 65 will almost triple and the number of people with chronic diseases will increase in tandem. It has been estimated that 10% of patients in Ireland consume over 60% of health resources⁵. Recent research conducted by this project team with Irish general practitioners (GPs) indicates that the majority of GPs report that significant changes are needed in our health system to make chronic disease management (CDM) work better^{8,9}. The Chronic Care Model (CCM)¹⁰ is a systematic approach to coordinating healthcare across levels (individual, organisational, local and national). Evidence indicates that this model of ‘person centred care,’ with coordination across care settings and providers is more effective than single disease models or uncoordinated interventions¹¹. Many countries are engaged in transition to the CCM¹². This study refers throughout to the CCM as the standard model of service design and service delivery.

The study seeks to ascertain the opinions of front line Hospital Consultants regarding critical elements of CDM. These observations are important in planning services and resource allocations in the years ahead, should care be transferred from the secondary and tertiary sectors into primary care as per the proposed healthcare reforms. It is also an opportunity to compare the opinions of Hospital Consultants with those of colleagues practicing in front line general practice.

1.2 Aim of Research

The aim of this research is to survey Hospital Consultants to identify what elements of the Chronic Care Model are currently in place. This will provide a baseline measure of Chronic Disease Management, using an internationally agreed set of parameters, and be of significant benefit for future benchmarking against ongoing healthcare transformation.

Objectives

To conduct a survey to deliver a baseline measure of CDM.

To identify strengths and weaknesses of CDM in Irish hospital services.

To inform the wider profession and policy makers.

To examine which elements of the Chronic Care Model are currently in place.

To compare CDM in Irish Hospital Consultant led services with General Practice.

Section Two: Method

2.1 Design

This study utilised a cross-sectional design.

2.2 Sampling

The questionnaire was sent to Members and Fellows of the Royal College of Physicians of Ireland (RCPI) currently practicing in Ireland with a Specialty listed in the RCPI's database as one of the following: Endocrinology (N=49), Cardiology (N=42), Respiratory (N=62), Gerontology (N=83), Nephrology (N=33), Neurology (N=29), Rheumatology (N=42) or Rehabilitation Medicine (N=6). This resulted in a total sampling frame of 346 Hospital Consultants.

2.3 Survey Instrument

The questionnaire was based on and similar to the questionnaire used in the GP survey to allow for comparisons^{8,9}. The survey was based largely on two surveys - Use of Chronic Care Model Elements Survey¹⁰ and included questions from A Survey Of Primary Care Physicians In Eleven Countries¹³. This resulted in a thirty-one item questionnaire which covered topics such as respondents' perception of CDM, access to care for patients, evidence of managed care within the services, resources available to the Hospital Consultant, the use of information technology within the services, respondents' perceptions of the barriers to effective CDM, future development of CDM and demographic details (Appendix 1).

2.4 Procedure

The postal questionnaire was conducted in three separate waves at one-month intervals, to secure a good response rate. The sample population was circulated between August and November 2012 with a questionnaire accompanied by a stamped addressed envelope for ease of return and a cover letter outlining the purpose of the study and assuring respondents of total confidentiality within the research team. A unique identifying number (UIN) ensured the anonymity of the respondent. Respondents who had completed and returned the questionnaire in a previous wave were checked off the database using their UIN to ensure that they did not receive another questionnaire in a subsequent wave.

2.5 Analysis

Descriptive statistics were used to describe the percentage of respondents who indicated their choice of items within the survey. Dichotomized variables (e.g. gender) were used in binary logistic regression models investigating impact of the doctor's gender on factors associated with CDM. Multiple logistic regression analyses were performed to identify demographic factors such as age and whether in a single-handed, two doctor or three or more doctor service, and factors associated with doctors' perceptions of CDM in their services. Comparisons are made between responses from Consultants and GPs. Analyses were performed in SPSS version 18 and in R version 2.12.2.

Section Three: Results

3.1 Response rate

The first wave of postal questionnaires was sent in August of 2012 to all Hospital Consultants in the sampling frame.

A total of 153 completed questionnaires were returned within the first postal round (45% response rate – Wave 1). The non-responders were sent a follow-up reminder letter and another copy of the survey questionnaire in September 2012 (Wave 2). A total of 39 completed questionnaires were returned (11% response rate – Wave 2). In October 2012 a third and final reminder letter plus questionnaire was sent to all non-responders. This resulted in an additional 35 completed questionnaires being returned (10% response rate – Wave 3).

Across the three postal waves we received 227 completed questionnaires, resulting in an overall response rate of 66%.

*It is important to note that the participants in the current study are the number of Hospital Consultants who are members and fellows of the Royal College of Physicians of Ireland, and are not the total number of Consultants working within hospital posts in Ireland.

3.2 Respondents' profile

This section outlines the clinical speciality, age and gender of respondents, and the location and size of their clinical service.

3.2.1 Clinical Specialty

Table 1 indicates the number of Hospital Consultants who are registered with the Medical Council, the numbers in the sampling frame as defined by membership of the RCPI and the clinical specialty of the 227 Hospital Consultants who completed the questionnaire.

Table 1: Responders according to clinical specialty.

Specialty	Numbers according to Medical Council Registration	Numbers in sampling frame	Number of Responders to Survey (%)
Endocrinology	74	49	30 (61%)
Cardiology	129	42	36 (85%)
Respiratory	100	62	39 (63%)
Gerontology	108	83	48 (57%)
Rheumatology	60	42	30 (71%)
Nephrology	53	33	18 (54%)
Neurology	62	29	18 (62%)
Rehabilitation Medicine	12	6	4 (66%)
Unknown			4
Total	598	346	227 (66%)

3.2.2 Age of respondents

Two (0.9%) respondents indicated that their age was less than 35 years. 146 (64.3%) indicated that their age was between 35-49 years. Seventy-one respondents (31.3%) indicated that their age was between 50-64 years. Seven (3.1%) indicated that their age was 65 years or older (Table 2).

One (0.4%) respondent did not indicate age (Table 2).

3.2.3 Gender of respondents

A total of 161 (70.9%) respondents were male, 59 (26%) respondents were female.

Seven (3.1%) respondents did not indicate gender (Table 2).

3.2.4 Service location

A total of 159 (70%) respondents indicated that their service is city centre based. Fifteen (6.6%) indicated that their practice was located within a city suburb. Forty four (19.4%) indicated that their practice was located within a small town. Three (1.3%) indicated that their practice was located within a rural setting (Table 2).

Six (2.6%) respondents did not indicate the location of their service (Table 2).

3.2.5 Clinical service description

A total of 102 (44.9%) respondents indicated that they are working within a department with three or more Hospital Consultants. Sixty five (28.6%) of respondents indicated that they are working within departments with two Hospital Consultants. Fifty nine (26%) respondents indicated that they are working in a single Hospital Consultant service (Table 2).

One (0.4%) respondent did not indicate the size of their service (Table 2).

Table 2: Age, gender, location and description of service.

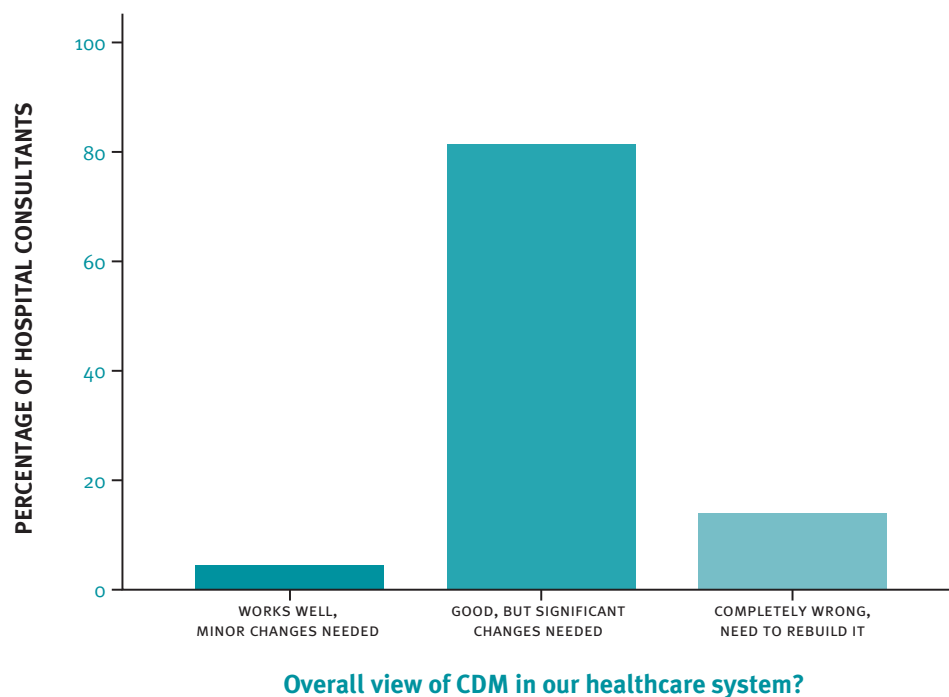
					Not indicated	Total
	number (%)	number (%)	number (%)	number (%)	number (%)	
Age of Respondents	Less than 35 years	35 – 49	50 – 64	65 years or older		
	2 (0.9%)	146 (64.3%)	71 (31.3%)	7 (3.1%)	1 (0.4%)	227
Gender of Respondents	Male		Female			
	161 (70.9%)		59 (26%)		7 (3.1%)	227
Location of Service	City	City Suburb	Small Town	Rural		
	159 (70%)	15 (6.6%)	44 (19.4%)	3 (1.3%)	6 (2.6%)	227
Service Description	3 or more Consultants	2 Consultants	Single Consultant			
	102 (44.9%)	65 (28.6%)	59 (26%)		1 (0.4%)	227

3.3 Perception of chronic disease management

This section examines Hospital Consultants' perception of chronic disease management within the Irish healthcare system.

Respondents were asked which of the following statements come closest to expressing their overall view of chronic disease management (CDM) in our healthcare system: Works well, minor changes needed; Good, but significant changes needed; Completely wrong, need to rebuild it.

Figure 1: Hospital Consultants perception of Chronic Disease Management in the Irish healthcare system (N=227)



A total of 221 (97.4%) respondents answered this question. Missing data = 6 (2.6%)

Ten (4.5%) Hospital Consultants indicated that on the whole, the healthcare system works well, and only minor changes are necessary to make CDM work better. 180 (81.4%) respondents indicated that there are some good things in our health system, but significant changes are needed to make CDM work better. 31 (14%) respondents indicated that our healthcare system has so much wrong with it that we need to completely rebuild it for CDM.

The age, gender, clinical speciality, size or location of the service in which they worked made no difference to the respondent's perception of CDM.

Table 3: Comparison between Consultants' and GPs' perception of chronic disease management in the Irish healthcare system.

	Hospital Consultants (N=221/227; 97.4%)	General Practitioners (N=368/380; 96.8%)
On the whole the healthcare system works pretty well and only minor changes are necessary to make it work better	10 (4.5%)	21 (5.7%)
There are some good things in our health system, but fundamental changes are needed to make it work better	180 (81.4%)	240 (65.2%)
Our healthcare system has so much wrong with it that we need to completely rebuild it	31 (14%)	107 (29.1%)

Hospital Consultants are overall more positive than GPs that the healthcare system works well with regard to the delivery of CDM. However, there is broad consensus between Hospital Consultants and GPs that some system change is required to facilitate the system to work more effectively in the delivery of CDM.

3.4 Access

This section outlines Hospital Consultants' perception of the ease of access their patients experience when attempting to access healthcare services and types of healthcare providers, and ease of paying for medical costs. It also reports on the types of out-of-hours services respondents provide for their patients.

How often do your fee-paying patients experience the following? (Table 4)

Table 4: Hospital Consultants' and GPs' perception of how often fee-paying patients experience difficulties in accessing services and paying for medical costs.

	Responder	Often	Sometimes	Rarely	Never
Have difficulty paying for medications or other out-of-pocket costs	HC (N=205; 90.3%)	35 (17.1%)	133 (64.9%)	31 (15.1%)	6 (2.9%)
	GP (N=373; 98%)	151 (40%)	178 (48%)	43 (12%)	1 (0.3%)
Experience long waiting times to see a hospital based specialist	HC (N=210; 92.5%)	25 (11.9%)	81 (38.6%)	88 (41.9%)	16 (7.6%)
	GP (N=376; 99%)	132 (35%)	129 (34%)	98 (26%)	17 (5%)
Have difficulty getting specialised diagnostic tests (e.g., CT imaging)	HC (N=209; 92.1%)	23 (11%)	86 (41.1%)	81 (38.1%)	19 (9.1%)
	GP (N=376; 99%)	120 (32%)	135 (36%)	106 (28%)	15 (4%)
Experience long waiting times to receive treatment after diagnosis	HC (N=210; 92.5%)	13 (6.2%)	62 (29.5%)	108 (51.4%)	27 (12.9%)
	GP (N=376; 99%)	76 (20%)	148 (40%)	133 (35%)	19 (5%)

HC= Hospital Consultant; GP=General Practitioner

The majority of Hospital Consultants feel that their fee-paying patients experience some difficulties in paying for medications or other out-of-pocket expenses. Nearly half of Hospital Consultants believe that their fee-paying patients often or sometimes experience long waiting times to see a hospital based specialist and experience difficulty getting specialised diagnostic tests. The majority of Hospital Consultants believe that their fee-paying patients rarely or never experience long waiting times to receive treatment after a diagnosis.

Younger Hospital Consultants were more likely to perceive their fee-paying patients as having difficulty paying for medications or out of pocket expenses. Hospital Consultants working within departments with three or more Consultants were more likely to perceive their fee-paying patients as having difficulties getting specialised diagnostic tests. Gerontology was the Specialist group that perceived their fee paying patients as experiencing long waiting times to see a Hospital Consultant and also long waiting times to receive treatment after diagnosis. Male Hospital Consultants were more likely to perceive their fee-paying patients as experiencing long waiting times to receive treatment after a diagnosis.

There is broad consensus between Hospital Consultants and GPs that fee-paying patients can experience difficulties paying for medications, accessing services and diagnostics and experience long waiting times to receive treatment after diagnosis.

How often do your public patients experience the following? (Table 5)

Table 5: Consultants' perception of how often their public patients experience difficulties in accessing services and paying for medical costs.

	Responder	Often	Sometimes	Rarely	Never
Experience long waiting times to see a Hospital Consultant	HC (N=217; 95.6%)	151 (69.6%)	58 (26.7%)	8 (3.7%)	0
	GP (N=369; 97%)	342 (93%)	25 (7%)	1 (0.3%)	1 (0.3%)
Have difficulty getting specialised diagnostic tests (e.g. CT imaging)	HC (N=216; 95.2%)	116 (53.7%)	70 (32.4%)	24 (11.1%)	6 (2.8%)
	GP (N=369; 97%)	326 (88%)	34 (9%)	6 (2%)	3 (1%)
Experience long waiting times to receive treatment after diagnosis	HC (N=215; 94.7%)	86 (40%)	86 (40%)	37 (17.2%)	6 (2.8%)
	GP (N=368; 96%)	253 (69%)	93 (25%)	20 (5%)	2 (1%)
Have difficulty paying for medications or other out-of-pocket costs	HC (N=215; 94.7%)	76 (35.3%)	76 (35.3%)	48 (22.3%)	15 (7%)
	GP (N=368; 96%)	87 (24%)	92 (25%)	123 (33%)	66 (18%)

HC= Hospital Consultant; GP=General Practitioner

The majority of Hospital Consultants believe that their public patients experience long waiting times to see a Hospital Consultant, have difficulty getting specialised diagnostic tests, and receiving treatment after diagnosis; and experience difficulty paying for medications or other out-of-pocket costs.

Hospital Consultants working in departments with three or more Consultants are more likely to perceive that their public patients have difficulty paying for medications or other out-of-pocket expenses. Male Consultants were more likely to perceive their public patients as experiencing difficulties getting specialised diagnostic tests and long waiting times to receive treatment after diagnosis.

There is broad consensus between Hospital Consultants and GPs that public patients experience difficulties paying for medications, accessing services and diagnostics and experience long waiting times to receive treatment after diagnosis.

When patients have been referred to you privately, how often do the following occur? (Table 6)

Table 6: Hospital Consultants' opinion of content and timeliness of referral letters from General Practitioners for private patients.

	Always	Often	Sometimes	Rarely	Never
You receive a referral letter from the GP with all relevant information (N=197; 86.8%)	17 (8.6%)	86 (43.7%)	80 (40.6%)	13 (6.6%)	1 (0.5%)
The information you require is available when needed (N=196; 86.3%)	21 (10.7%)	87 (44.4%)	72 (36.7%)	16 (8.2%)	0

When patients have been referred to you publicly, how often do the following occur?

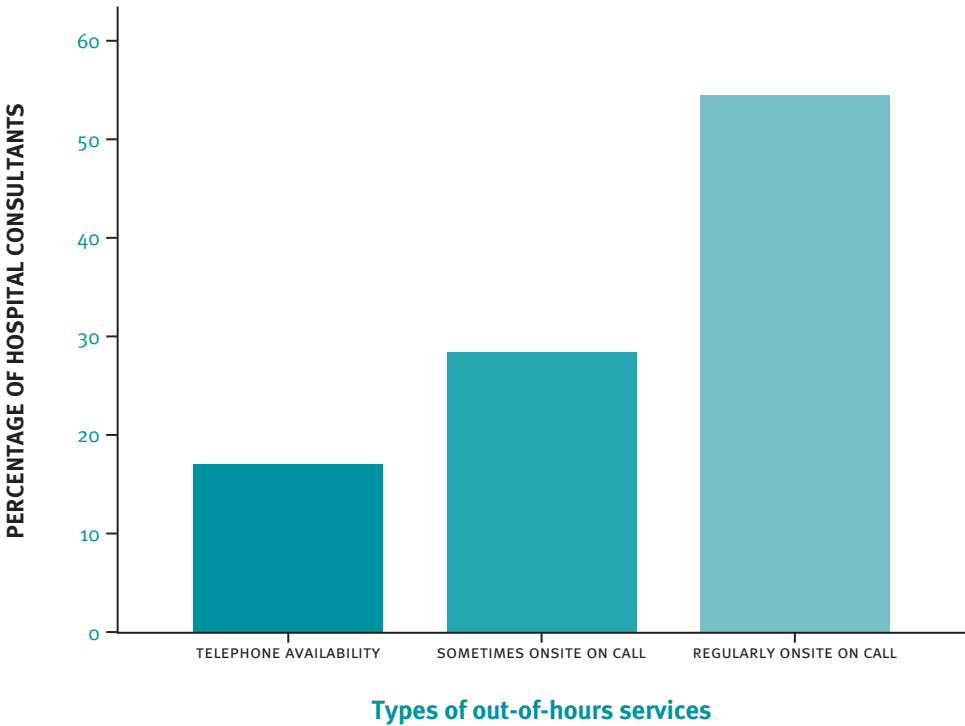
Table 7: Hospital Consultants' opinion of content and timeliness of referral letters from General Practitioners for public patients.

	Always	Often	Sometimes	Rarely	Never
You receive a referral letter from the GP with all relevant information (N=209; 92.1%)	14 (6.7%)	81 (38.8%)	89 (42.6%)	22 (10.5%)	3 (1.4%)
The information you require is available when needed (N=209; 92.1%)	12 (5.7%)	89 (42.6%)	84 (40.2%)	24 (11.5%)	0

There is little difference between provision of information for public and private patients.

What level of clinical involvement do you provide for out-of-hours care?

Figure 2: Provision of out-of-hours service for patients



A total of 211 (93%) respondents indicated that they provide an out-of-hours service for their patients. Thirty-six (17.1%) respondents indicated that they provide telephone support. Sixty (28.4%) respondents indicated that they sometimes provide onsite on-call cover and 115 (54.5%) respondents indicated that they regularly provide onsite on-call cover for their patients during out-of-hours. Twenty-eight (12.3%) respondents provide two or more out-of-hours services for their patients.

Younger Hospital Consultants and Consultant Gerontologists report providing regular onsite out-of-hours cover.

Outside of your service, do your patients have effective local access to the following?

Table 8: Hospital Consultants' versus GPs' perception of effective local access to services for both private fee paying and public patients.

	Responder	Yes (Private fee paying patients)	Yes (public patients)
Physiotherapist	HC	152 (70%)	134 (61.8%)
	GP	350 (93%)	238 (63%)
Occupational Therapist	HC	86 (39.8%)	114 (52.8%)
	GP	139 (37%)	156 (41%)
Speech and Language Therapist	HC	76 (35.2%)	104 (48.1%)
	GP	151 (40%)	141 (37%)
Podiatrist*	HC	77 (35.8)	58 (27%)
	GP	-	-
Psychologist	HC	59 (27.4%)	46 (21.4%)
	GP	219 (58%)	92 (24%)
Dietician	HC	110 (51.2%)	123 (57.2%)
	GP	245 (65%)	189 (5%)
Social Worker	HC	50 (23.3%)	101 (47%)
	GP	143 (38%)	197 (52%)
Counsellor*	HC	44 (20.7%)	36 (16.9%)
	GP	-	-

HC= Hospital Consultant; GP=General Practitioner

* Question not asked in GP survey

Hospital Consultants reported that the majority of their private fee paying patients have effective access to Physiotherapy and Dietetic services. However, Hospital Consultants reported that access to Occupational Therapy, Speech and Language Therapy, Podiatry, Psychology, Social work and Counselling Services were ineffective for private fee paying patients.

Hospital Consultants reported that the majority of their public patients had effective access to Physiotherapy, Occupational Therapy and Dietetics. Hospital Consultants perceived that access to Speech and Language Therapy, Podiatry, Psychology, Social Work and Counselling services was ineffective to varying degrees.

Respiratory, Cardiology and Gerontology Consultants were more likely to report effective access for the fee-paying patients for physiotherapy services than Consultants from other Specialities. Neither the age, nor gender of the Hospital Consultant, nor the size or location of the service within which they work had any impact on effective access to local services for fee-paying patients.

Hospital Consultants report lesser access than GPs for fee-paying patients for Physiotherapy, Psychology, Dietetics and Social Work. There is broad consensus between Hospital Consultants and GPs with regard to access for allied health services for public patients with the exception of the access to Dietetic services.

3.5 Evidence of managed care

This section examines the use of evidence based treatment guidelines and strategies for managing common conditions, such as providing patients with a list of their prescription medication, and the provision of advice around risk factors. It also describes the frequency of routine clinical audit completions.

In your Specialty, to what extent, do you routinely use written evidence-based treatment guidelines in the conditions that you most commonly treat?

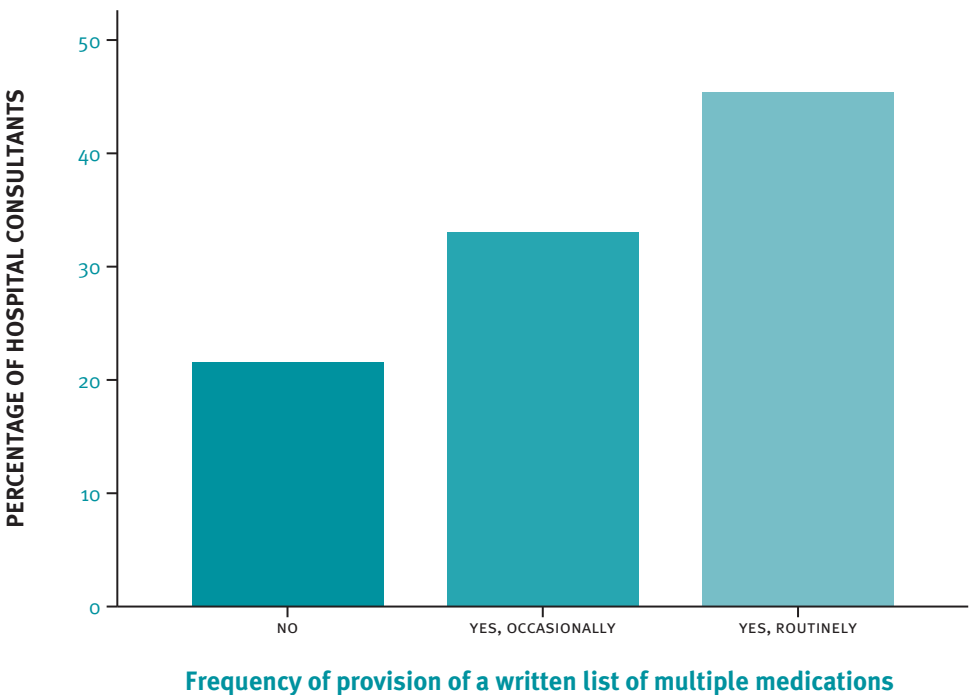
Table 9: Number of Hospital Consultants who routinely use written, evidence-based treatment guidelines, for common conditions (N=226; 99.6%).

Yes, routinely use guidelines	Yes, sometimes use guidelines	No, do not routinely use guidelines	No guidelines available
141 (62.4%)	78 (34.5%)	5 (2.2%)	2 (0.9%)

The majority of Hospital Consultants are routinely using written evidence-based treatment guidelines in the conditions that they most commonly treat.

Do you provide your patients who take multiple medications (e.g. 5 or more) with a written list of their medications?

Figure 3: Provision of a written list of medication for patients taking multiple medications (N=227)

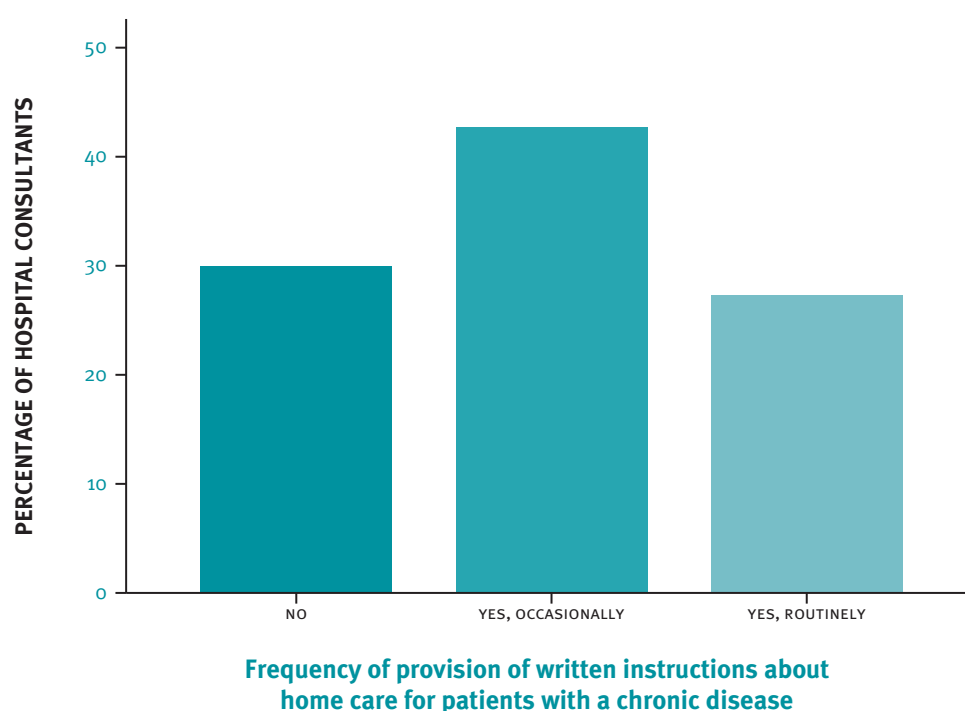


One hundred and three (45.4%) respondents indicated that they routinely provide patients who take multiple medications with a written list of their medications. Seventy five (33%) respondents indicated that they occasionally provide patients who take multiple medications with a written list of their medications. Forty nine (21.6%) respondents indicated that they do not provide patients who take multiple medications with a written list of their medications.

Neither age nor gender of the Hospital Consultant nor the size or location of the service within which they worked had any impact on whether a written list of medications for patients taking multiple medications was provided.

Do you give your patients with chronic diseases written instructions about how to manage their own care at home?

Figure 4: Provision of a written list of instructions to patients with a chronic disease about how to manage their own care at home (N=227)



Sixty two (27.3%) respondents indicated that they routinely provide their patients who have chronic diseases, with written instructions about how to manage their own care at home. Ninety seven (42.7%) respondents indicated that they occasionally provide their patients who have chronic diseases with written instructions about how to manage their own care at home. Sixty eight (30%) respondents indicated that they do not provide their patients who have chronic diseases with written instructions about how to manage their own care at home.

Neither age, nor gender, nor Speciality of the Hospital Consultant nor the size or location of the service within which they worked had any impact on whether a written list of instructions was provided for patients taking multiple medications.

How often do you systematically advise patients about risk factors relating to their conditions?

Table 10: Frequency of advice to patients on risk factors relating to their condition (N=223; 98.2%).

Rarely	Sometimes	Often	Never
2 (0.9%)	19 (8.5%)	202 (90.6%)	0

The majority of Hospital Consultants inform patients about risk factors relating to their conditions. Hospital Consultants working within larger services are more likely to advise patients about risk factors relating to their conditions. Neither gender, nor age, nor specialty or location of the service had any bearing on the frequency of advice given to patients about risk factors relating to their conditions.

How often do you advise family members of risk factors?

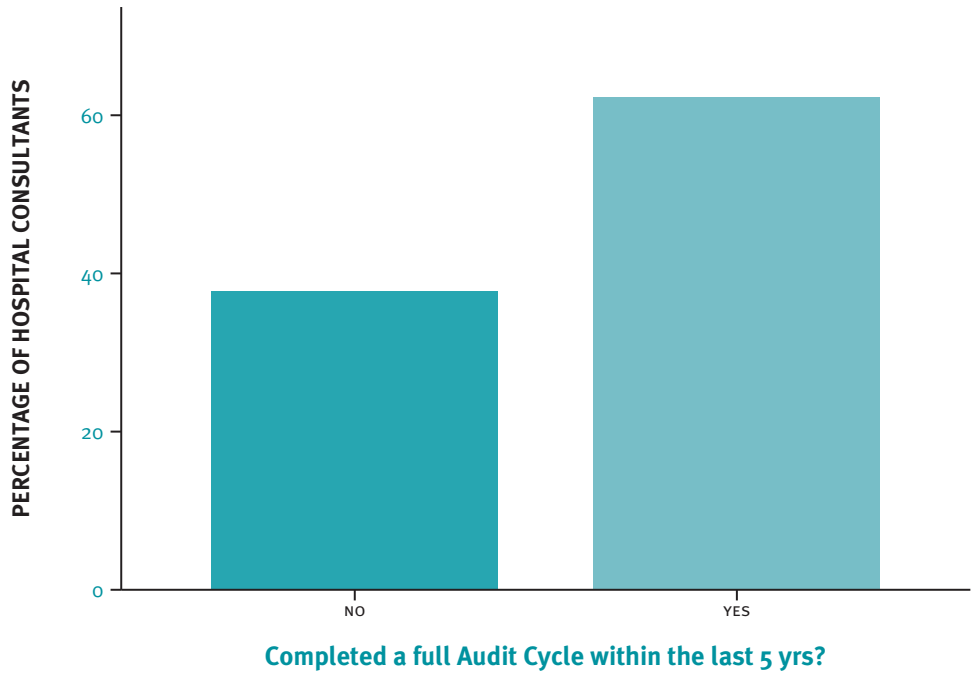
Table 11: Frequency of advice to family members of patients concerning risk factors (N=223; 98.2%).

Rarely	Sometimes	Often	Never
25 (11.2%)	82 (36.8%)	115 (51.6%)	1 (0.4%)

The majority of Hospital Consultants inform patients' families concerning risk factors. Hospital Consultants working within larger services are more likely to advise family members of risk factors. Cardiologists, Endocrinologists and Gerontologists are most likely to warn family members. Neither age, nor gender, nor location of service had any bearing on the frequency of advice given to patients' families about risk factors relating to conditions.

Prior to 2011, had you completed a full Audit Cycle within the last 5 years on 1 or more chronic diseases?

Figure 5: Prior to 2011, had you completed a full Audit Cycle within the last 5 yrs?



A total of 225 (99.1%) of respondents answered this question. Missing data = 2 (0.9%)

A total of 140 (62.2%) respondents indicated that they had completed a full audit cycle within the last 5 years on 1 or more chronic diseases. Eighty five (37.8%) respondents indicated that they had not completed a full audit cycle within the last five years.

Neither age, nor gender, nor Speciality of the Hospital Consultant, nor the size or location of the service within which they worked had any impact on audit activity.

How often do you currently use the following approaches to improving care for patients with chronic diseases?

Table 12: Frequency of use of strategies to improve care for patients with chronic diseases.

Strategy	Never	Rarely	Occasionally	Usually	Always
Use a register to identify/track care (N=222; 97.8%)	80 (36%)	36 (16.2%)	51 (23%)	39 (17.6%)	16 (7.2%)
Use a tracking system to remind patients about visits (N=225; 99.1%)	97 (43.1%)	49 (21.8%)	25 (11.1%)	41 (18.2%)	13 (5.8%)
Follow up patients between visits (you or your staff) (N=225; 99.1%)	30 (13.3%)	33 (14.7%)	103 (45.8%)	42 (18.7%)	17 (7.6%)
Use published team guidelines as the basis for your management (N=222; 97.8%)	20 (9%)	26 (11.7%)	50 (22.5%)	91 (41%)	35 (15.8%)
Involve office staff in reminding patients in need of follow-up or other services (N=222; 97.8%)	28 (12.6%)	25 (11.3%)	70 (31.5%)	73 (32.9%)	26 (11.7%)
Assist patients in setting and attaining self-management goals (N=224; 98.7%)	13 (5.8%)	19 (8.5%)	61 (27.2%)	100 (44.6%)	31 (13.8%)
Refer patients to someone within your hospital for education about their condition (N=224; 98.7%)	13 (5.8%)	11 (4.9%)	51 (22.8%)	108 (48.2%)	41 (18.3%)
Refer patients to someone outside your hospital for education about their condition (N=224; 98.7%)	57 (25.4%)	75 (33.5%)	61 (27.2%)	21 (9.4%)	10 (4.5%)
Use flow sheets to track critical elements of care (N=224; 98.7%)	59 (26.3%)	58 (25.9%)	53 (23.7%)	33 (14.7%)	21 (9.4%)

The majority of Hospital Consultants follow up with patients between visits, use published evidence based guidelines within their team, involve office staff in reminding patients about follow-up or other services, assist patients in setting goals, and refer patients to someone in the hospital for education about their condition. However the majority of Hospital Consultants do not use a register to identify and track care, or use a tracking system to remind patients about visits, or use a flow sheet to track critical elements of care, or refer patients to someone outside the hospital for education about their condition, all of which are regarded as part of good chronic disease management in the context of the CCM.

3.6 Resources

This section examines the types of healthcare providers and other resources that each service has available to them for the provision of CDM. It describes whether respondents believe that they are integrated with local General Practitioners. It also outlines the severity of problems relating to shortages of Hospital Consultant colleagues within their main areas and time spent on coordination of care.

In your own service, other than doctors, does your service include any other healthcare providers?

Table 13: The types of healthcare providers, ranked in order of most frequent to less frequent, within respondents' services (N=223; 98.2%).

Healthcare Provider	Yes
Clinical Nurse Specialist	196 (87.9%)
Receptionist	142 (63.7%)
Dietician	132 (59.2%)
Social Worker	96 (43%)
Administrator	85 (38.1%)
Psychologist	48 (21.5%)
Podiatrist	42 (18.8%)
Team Manager	19 (8.5%)
Counsellor	17 (7.6%)

The majority of Hospital Consultants have a Clinical Nurse Specialist and a Dietician as part of the clinical team members within their service. The majority of Hospital Consultants also have a Receptionist within their service.

Table 14: Strength of agreement on levels of resources for chronic disease management.

	Responder	Strongly disagree	Disagree	Neither	Agree	Strongly agree
I am happy with CDM as it is	HC (N=215; 94.7%)	51 (23.7%)	112 (52.1%)	36 (16.7%)	14 (6.5%)	2 (0.9%)
	GP (N=370; 97%)	108 (29%)	158 (43%)	69 (19%)	22 (6%)	13 (3%)
I want to put more time and energy into CDM	HC (N=211; 93%)	6 (2.8%)	22 (10.4%)	53 (25.1%)	90 (42.7%)	40 (19%)
	GP (N=372; 98%)	14 (4%)	35 (9%)	87 (23%)	173 (47%)	63 (17%)
PCT* will enhance CDM in my service	HC (N=220; 96.9%)	8 (3.6%)	31 (14.1%)	49 (22.3%)	91 (41.4%)	41 (18.6%)
	GP (N=369; 97%)	31 (8%)	65 (18%)	110 (30%)	115 (31%)	48 (13%)
My hospital should put more time and energy into CDM	HC (N=220; 96.9%)	6 (2.7%)	22 (10%)	54 (24.5%)	86 (39.1%)	52 (23.6%)
	GP (N=372; 98%)	23 (6%)	56 (15%)	102 (28%)	139 (37%)	52 (14%)
I am willing to share the CDM workload with GPs**	HC (N=221; 97.4%)	5 (2.3%)	9 (4.1%)	28 (12.7%)	95 (43%)	84 (38%)
	GP (N=374; 98%)	11 (3%)	25 (7%)	50 (13%)	202 (54%)	86 (23%)
CDM should take place largely at a GP practice level and delivered by GPs	HC (N=220; 96.9%)	10 (4.5%)	42 (19.1%)	68 (30.9%)	78 (35.4%)	22 (10%)
	GP (N=373; 98%)	18 (5%)	36 (10%)	76 (20%)	159 (42%)	84 (23%)
CDM should take place largely at GP practice level by nurses, under GP supervision	HC (N=217; 95.6%)	31 (14.3%)	60 (27.6%)	65 (30%)	48 (22.1%)	13 (6%)
	GP (N=373; 98%)	19 (5%)	55 (15%)	103 (28%)	139 (37%)	57 (15%)
CDM should take place largely at GP practice level by nurses working independently of GPs	HC (N=218; 96%)	94 (43.1%)	78 (35.8%)	31 (14.2%)	9 (4.1%)	6 (2.8%)
	GP (N=372; 98%)	137 (37%)	155 (42%)	56 (15%)	15 (4%)	9 (2%)
CDM should take place largely at hospital level delivered by Consultant led teams^	HC (N=216; 95.2%)	32 (14.8%)	80 (37%)	58 (26.9%)	38 (17.6%)	8 (3.7%)
	GP	-	-	-	-	-
CDM should take place largely in the community, led by Consultant led teams^	HC (N=218; 96%)	15 (6.9%)	21 (9.6%)	75 (34.4%)	74 (33.9%)	33 (15%)
	GP	-	-	-	-	-

HC= Hospital Consultant; GP=General Practitioner. * PCT = Primary Care Teams; ^ No GP data available for this question; ** = the corresponding statement in the GP survey read: 'I am willing to share the CDM workload with my local hospital'.

The majority of Hospital Consultants either disagree or strongly disagree that they are happy with CDM as it is. The majority of Hospital Consultants perceive chronic disease management as a valuable endeavour with the majority of respondents indicating either an agreement or a strong agreement that they wished to put more time and energy into CDM. There is also an expressed belief in Primary Care Teams with the majority of Hospital Consultants either agreeing or strongly agreeing that PCTs would enhance CDM in their service. The majority of Hospital Consultants either agreed or strongly agreed that their hospital should put more time and energy into CDM. The majority of Hospital Consultants either agreed or strongly agreed that they would be willing to share the CDM workload with GPs. There was mixed opinion as to the location of CDM. Forty-five per cent of Hospital Consultants reported that they either agreed or strongly agreed that CDM should take place at a GP practice level and delivered by GPs; nearly a third of respondents indicated that they neither agreed nor disagreed with this statement; nearly a quarter of Hospital Consultants indicated that they either disagreed or strongly disagreed with CDM taking place largely at GP practice level delivered by GPs. Over a quarter of Hospital Consultants indicated that they agreed or strongly agreed that CDM should take place at GP practice level by nurses, under GP supervision; nearly a third of respondents indicated that they neither agreed nor disagreed with this statement; over forty percent of Hospital Consultants either disagreed or strongly disagreed that CDM should take place largely at GP practice level by nurses, under GP supervision. The majority of Hospital Consultants were not in favour of CDM being delivered by Nurses independent of GPs, with the majority indicating that they either disagreed or strongly disagreed that CDM should take place largely at GP practice level by nurses working independently of GPs. A fifth of Hospital Consultants reported that they either agreed or strongly agreed that CDM should take place largely at hospital level delivered by Consultant led teams; a quarter of respondents indicated that they neither agreed nor disagreed with this statement; just half of Hospital Consultants indicated that they either disagreed or strongly disagreed that CDM should take place largely at hospital level delivered by Consultant led teams. Forty eight percent of Hospital Consultants either agreed or strongly agreed that CDM should take place largely in the community, led by Consultant led teams; over a third of respondents indicated that they neither agreed nor disagreed with this statement; sixteen percent of Hospital Consultants indicated that they either disagreed or strongly disagreed that CDM should take place largely in the community, led by Consultant led teams.

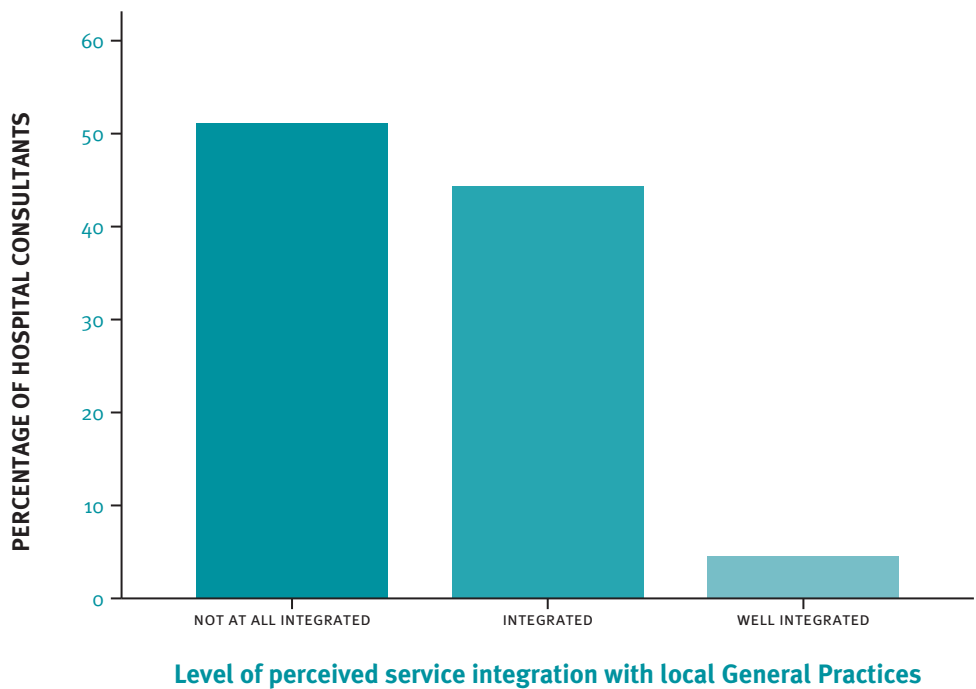
The 35-49 year old Hospital Consultants were less likely to be happy with how CDM is currently configured. Hospital Consultants working within a single Consultant service indicated that they wished to put more time and energy into CDM. Demographic variables did not impact on the perception of the enhancement of PCT on CDM or whether hospitals should put more time and energy into CDM or the willingness to share CDM workload with GP colleagues. Endocrinologists, Cardiologists and Gerontologists were more likely to think that CDM should take place at GP practice level delivered by GPs. Cardiologists and Gerontologists were more likely to agree that CDM should take place at GP practice level by nurses, under GP supervision. Demographic factors did not impact on the concept of CDM taking place at GP practice level by nurses, working independently of GPs or whether CDM should take place in the hospital, delivered by Hospital Consultant led teams. Cardiologists, Endocrinologists, Gerontologists and Respiratory Consultants were more likely to think that CDM should take place in the community, delivered by Specialist led teams.

There is broad agreement between Hospital Consultants and GPs with regard to their perception of CDM. Both groups wish to put more time and energy into CDM. Hospital Consultants are more positive than GPs about the potential of the PCT for the delivery of CDM. There is consensus between the groups that hospitals should put more time and energy into CDM. Both groups indicate their willingness to share the CDM workload between primary

and secondary care services. GPs were more likely than Hospital Consultants to indicate that CDM should take place at GP practice level and delivered by GPs. GPs were more likely than Hospital Consultants to indicate that CDM should take place at GP practice level by nurses under GP supervision. Neither group wishes to see CDM delivered by practice nurses working independently of GPs.

How well integrated is your service with local GP practices?

Figure 6: How well is your service integrated with local GP practices?



*A total of N=221 (97.4%) responded to this question. Missing data = 5 (2.2%).
1 (0.4%) respondent indicated that this question was not relevant to them.*

A total of 108 (48.8%) respondents indicated that their service was either integrated or well integrated with local GPs.

Hospital Consultants working within a department with three or more Consultants were more likely to think that their service was well integrated with local GP practices. Younger Hospital Consultants were less likely to think that their service was well integrated with local GP practices.

How much of a problem, if any, are the following?

Table 15: Severity of problems relating to shortages of Hospital Consultant colleagues and time spent on coordination of care.

	Responder	Major problem	Minor problem	Not a problem
Amount of time you or your staff spend on administration	HC (N=221; 97.4%)	146 (66.1%)	63 (28.5%)	12 (5.4%)
	GP (N=375; 98%)	245 (65%)	102 (27%)	28 (7%)
Amount of time you spend coordinating care for your patients	HC (N=222; 97.8%)	118 (53.2%)	82 (36.9%)	22 (9.9%)
	GP (N=375; 98%)	212 (56%)	127 (34%)	36 (10%)
Shortage of Specialist colleagues in your main centre of practice	HC (N=220; 96.9%)	103 (46.8%)	63 (28.6%)	54 (24.5%)
	GP (N=362; 95%)	51 (14%)	122 (34%)	189 (52%)

HC= Hospital Consultant; GP=General Practitioner

The majority of respondents believe that the amount of time they or their staff, spend on administration, including the amount of time they spend on coordinating care for their patients, is a major problem. A total of 166 (75.4%) respondents perceive there to be a shortage of Hospital Consultant colleagues in their main centre of practice.

Younger Hospital Consultants and also Hospital Consultants working within a department with one or two Consultants were more likely to perceive the amount of time that they or their staff spend on administration as a major problem. Younger Hospital Consultants were more likely to perceive the amount of time they spend coordinating care for their patients as a major problem. Hospital Consultants working in a department with a single Consultant and Consultants working within a rural or a small town were more likely to perceive a shortage of Hospital Consultant colleagues in their service as a major problem.

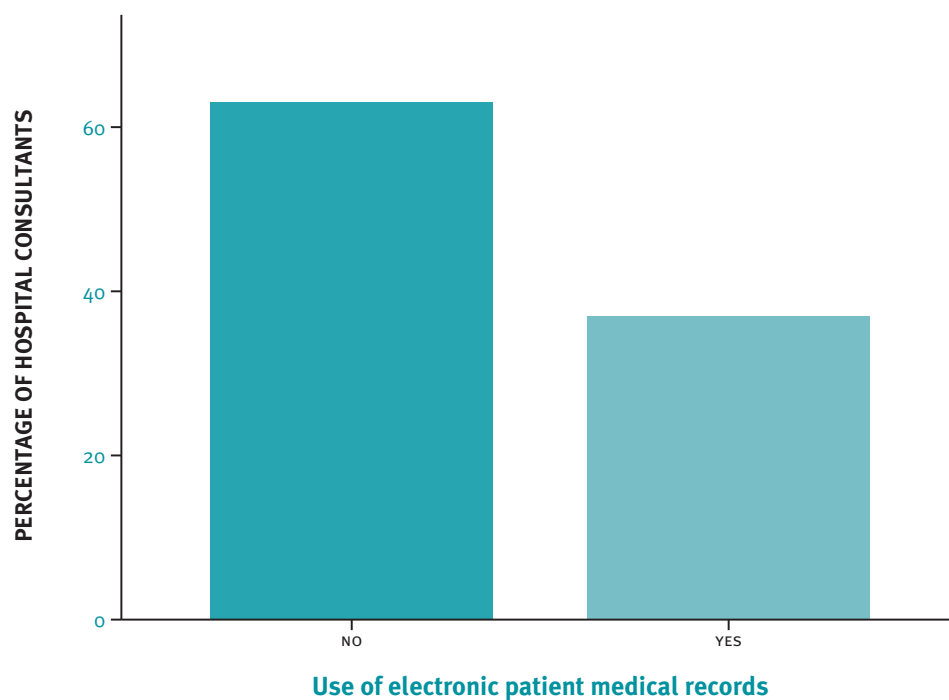
There is consensus between Hospital Consultants and GP colleagues that the amount of time they or their staff spend on administration and the amount of time they spend coordinating care for patients is a major problem. Hospital Consultants are more likely to perceive a shortage of Hospital Consultant colleagues in their main centre of practice as being a major problem.

3.7 Information technology

This section illustrates the number of Hospital Consultants who use electronic patient medical records within their service. It highlights the scope of information technology systems in communicating with patients through email and text messages. It investigates the ease with which respondents can generate patient information and perform tasks using their current IT system.

Do you routinely use electronic patient medical records in your service?

Figure 7: Do you use electronic patient medical records in your service?



A total of N=219 (96.5%) of respondents answered this question. Missing data = 8 (3.5%)

A total of 81 (37%) respondents indicated that they routinely use electronic patient medical records in their service, whereas a total of 138 (63%) respondents indicated that they do not routinely use electronic patient medical records in their service.

A department with three or more Hospital Consultants is more likely to use electronic patient medical records. There was no difference in the use of electronic patient medical records according to location of service, age, gender or speciality of the Consultant.

This contrasts with the use of electronic patient medical records within general practice⁹. A total of 310 (82%) GP respondents indicated that they do use electronic patient medical records in their practice.

Do you use any of the following technologies in your service?

Table 16: The use of technology within services.

	Responder	Yes, used routinely	Yes, used occasionally	No
Electronic access to your patients' laboratory test results	HC (N=222; 97.8%)	190 (85.6%)	25 (11.3%)	7 (3.2%)
	GP (N=378; 99%)	272 (72%)	11 (3%)	95 (25%)
Electronic ordering of laboratory tests	HC (N=217; 95.6%)	68 (31.3%)	23 (10.6%)	126 (58.1%)
	GP (N=373; 98%)	85 (23%)	6 (2%)	282 (75%)
Electronic entry of clinical notes, including medical history and follow-up	HC (N=221; 97.4%)	35 (15.8%)	30 (13.6%)	156 (70.6%)
	GP (N=378; 99%)	292 (77%)	13 (3%)	73 (20%)
Electronic prescribing of medication	HC (N=220; 96.9%)	14 (6.4%)	11 (5%)	195 (88.6%)
	GP (N=377; 99%)	311 (83%)	8 (2%)	58 (15%)
Electronic alerts or prompts about ADRs or drug interaction	HC (N=219; 96.5%)	11 (5%)	23 (10.5%)	185 (84.5%)
	GP (N=376; 98%)	240 (64%)	35 (9%)	101 (27%)

HC= Hospital Consultant; GP=General Practitioner; ADRs=Adverse Drug Reactions

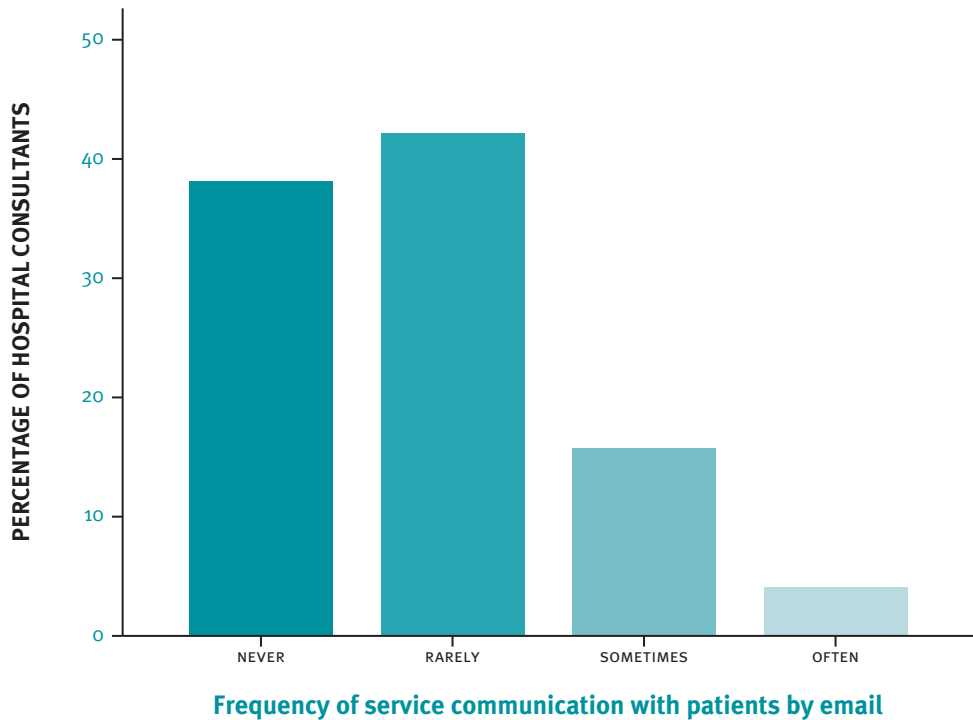
The majority of Hospital Consultants reported having electronic access to their patients' test results. However, the majority of Hospital Consultants reported not having electronic access to ordering tests, entry of clinical notes, prescribing of medication, or access to alerts to drug interactions.

Hospital Consultants working in a department with three or more Consultants were more likely to access their patients' laboratory results electronically. No other question relating to the use of technology was affected by any demographic parameters.

Hospital Consultants and GPs reported being able to access patients' laboratory test results and order laboratory tests electronically to the same degree. More Hospital Consultants report not having electronic entry of clinical notes, electronic prescribing of medication or electronic alerts or prompts about adverse drug reactions or drug interactions when compared to GPs.

How often does your service communicate with patients by email?

Figure 8: How often does your service communicate with patients by email?

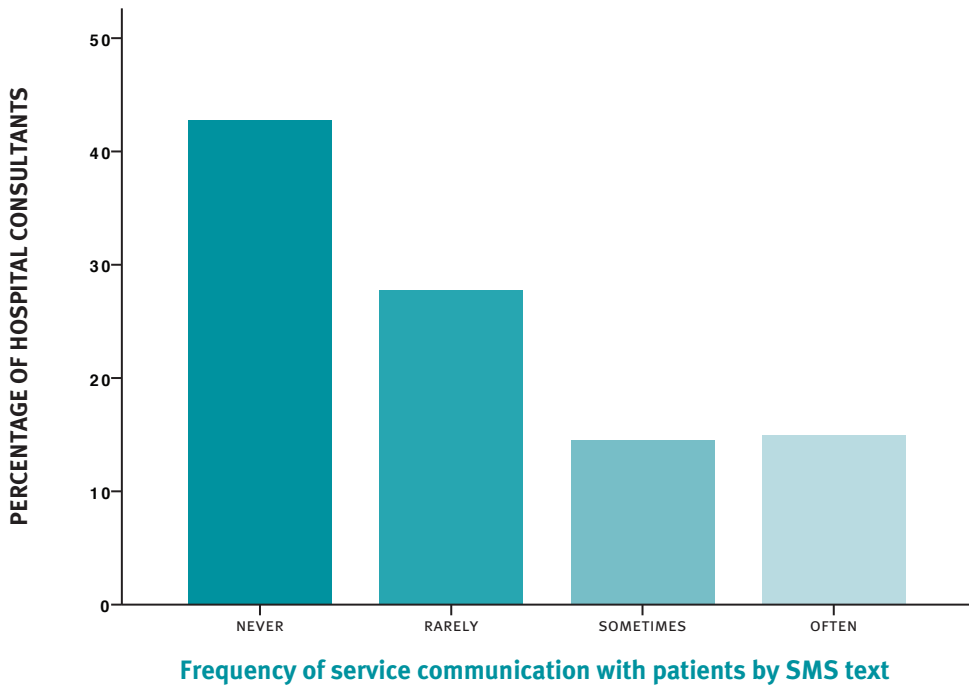


Nine respondents (4%) indicated that their service often communicates with patients by email. Thirty five (15.7%) indicated that their service sometimes communicates with patients by email. Ninety four (42.2%) indicated that their service rarely communicates with patients by email. Eighty-five (38.1%) indicated that their service never communicates with patients by email.

Neither the age, nor gender, nor speciality of the Hospital Consultant, nor the location or size of the service within which they worked, had any role to play in the frequency of email communication with patients.

How often does your service communicate with patients by SMS Text?

Figure 9: How often does your service communicate with patients by SMS text?



Thirty three (15%) respondents indicated that their services often communicate with patients by SMS Text. Thirty two (14.5%) indicated that their services sometimes communicate with patients by SMS Text. Sixty one (27.7%) indicated that their services rarely communicate with patients by SMS Text. Ninety four (42.7%) indicated that their services never communicate with patients by SMS Text.

Neither the age, gender, nor speciality of the Consultant, nor the location or size of the service within which they worked, had any role to play in the frequency of SMS text communication with patients.

With the patient medical records system you currently have, how easy would it be to generate the following information about your patients?

Table 17: The ease with which respondents can generate patient information using their current medical records system.

	Easy	Difficult	Cannot generate	Is process computerised?	
				No	Yes
List of individual patients' medications (N=213; 93.8%)	37 (17.4%)	75 (35.2%)	101 (47.4%)	163 (71.8%)	44 (27%)
Patients due or overdue for a service (e.g. scope ... 3months) (N=204; 89.9%)	36 (17.6%)	94 (46.1%)	74 (36.3%)	156 (68.7%)	59 (37.8%)
List of patients by lab result (e.g. HbA1C) (N=210; 92.5%)	40 (19%)	93 (44.3%)	77 (36.7%)	161 (70.9%)	90 (55.9%)
List of patients by diagnosis (e.g. HTN) (N=215; 94.7%)	32 (14.9%)	101 (46.9%)	82 (38.1%)	173 (76.2%)	75 (43.4%)

The majority of respondents reported finding it difficult or being unable to generate a list of individual patients' medications, to determine which patients were due or overdue for a service, or create a list of patients by laboratory result or by diagnosis.

Neither the age, gender, nor speciality of the Hospital Consultant nor the location or size of the service within which they worked, had any role to play in the ability to generate a list of patients by diagnosis or by lab result or a list of patients due or overdue for a service, or to generate a list of all medications for a patient.

Are the following tasks routinely performed within your service?

Table 18: Tasks that are routinely performed within the service.

	Yes, using a computer system	Yes, using a manual system	No
Patients are sent reminder notices (e.g., for routine check-ups) (N=219; 96.5%)	57 (26%)	80 (36.5%)	82 (37.4%)
All laboratory tests are tracked until results reach clinicians (N=220; 96.9%)	34 (15.5%)	62 (28.2%)	124 (56.4%)
You receive an alert or prompt to provide patients with test results (N=220; 96.9%)	11 (5%)	20 (9.1%)	189 (85.9%)
You receive a reminder for guideline-based interventions (N=220; 96.9%)	4 (1.8%)	5 (2.3%)	211 (95.9%)

In the majority of cases, patients are sent a reminder notice, mostly through a manual system within the service. However, tasks such as laboratory tests being tracked until results reach clinicians, receiving an alert to provide patients with test results or a reminder to utilise guideline based interventions are not routinely performed in the service.

Hospital Consultants in larger services are likely to send patients reminder notices using a manual system. Endocrinologists, Cardiologists and Respiratory Specialists are more likely to send patients reminder notices using an electronic system. Neither the age nor gender of the Consultant, nor the location or size of service within which the Consultant operated, had any effect on their ability to send patients reminder notices.

Hospital Consultants working in a department with three or more Consultants were more likely to report that all laboratory test results could be tracked until results reached clinicians. Neither the age nor gender, nor speciality of the Consultant, nor location of the service within which they work had any bearing on their ability to track laboratory test results.

No demographic parameters influenced whether the Hospital Consultants received an alert or prompt to provide patients with test results, or whether they received a reminder for guideline based interventions.

3.8 Barriers to effective chronic disease management

This section outlines the importance of perceived barriers to the effective delivery of chronic disease management within hospital services.

Respondents were asked to rate the following in terms of their perceived importance as being barriers to the effective management of chronic diseases in their service.

Table 19: Perceived importance of barriers to effective management of chronic diseases within your service.

	Responder	Extremely important	Important	Not important
Lack of appropriate funding	HC (N=224; 98.7%)	111 (49.6%)	108 (48.2%)	5 (2.2%)
	GP (N=378; 98%)	286 (76%)	59 (15%)	33 (9%)
Increased workload/ lack of time	HC (N=224; 98.7%)	103 (46%)	114 (50.8%)	7 (3.1%)
	GP (N=379; 99%)	310 (82%)	51 (13%)	18 (5%)
Poor communication between hospital teams and General Practitioners	HC (N=225; 99.1%)	60 (26.7%)	153 (68%)	12 (5.3%)
	GP (N=379; 99%)	206 (55%)	107 (28%)	66 (17%)
Lack of ongoing access to Hospital Consultant colleagues for advice	HC (N=222; 97.8%)	39 (17.6%)	156 (70.3%)	27 (12.2%)
	GP (N=379; 99%)	217 (57%)	107 (28%)	55 (15%)
Lack of skills and education/ knowledge gaps	HC (N=223; 98.2%)	35 (15.7%)	164 (73.5%)	24 (10.8%)
	GP (N=377; 97%)	91 (24%)	132 (35%)	154 (41%)

HC= Hospital Consultant; GP=General Practitioner

The majority of respondents considered the lack of appropriate funding, poor communication between hospital teams and General Practitioners, an increase in workload, a lack of ongoing access to Hospital Consultant colleagues for advice and a lack of skills and education as either important or extremely important barriers to the effective management of chronic diseases.

Male Hospital Consultants were more likely to think that a lack of appropriate funding was an extremely important barrier to effective CDM. No other demographic parameter influenced the importance of a lack of appropriate funding as a barrier to CDM.

Younger Hospital Consultants and Consultants working within a department with three or more Consultants were more likely to perceive an increased workload and a lack of time as an extremely important barrier to effective CDM. Neither the gender nor the Specialty of the Hospital Consultant, nor the location of the service played any role in the perception of an increased workload or a lack of time as a barrier to effective CDM.

Male Hospital Consultants were more likely to think that poor communication between hospital teams and GPs as an extremely important barrier to effective CDM. No other demographic parameter influenced the perceived importance of communication between hospital teams and GPs as a barrier to CDM.

No demographic parameters played any role in the perception of the importance of the lack of ongoing access to Hospital Consultants for advice.

Gerontologists were more likely to perceive a lack of skills and education or knowledge gaps as important or extremely important barriers. No other demographic parameter influenced the importance of a lack of skills and education or knowledge gaps as a barrier to CDM.

There was broad consensus between Hospital Consultants and GPs that the perceived lack of appropriate funding, an increased workload and a lack of time, and a lack of ongoing access to Hospital Consultants for advice were important barriers to the effective delivery of CDM. Hospital Consultants were more likely to perceive poor communication between hospital teams and GPs, and a lack of skills and education or knowledge gaps as barriers to effective CDM.

3.9 Future development of chronic disease management

This section examines Hospital Consultants' perceptions of the importance of resources for the development of CDM and their opinion on shared care initiatives between General Practitioners and hospitals.

Respondents were asked to rate the following resources in terms of importance for allowing further development of CDM in their service.

Table 20: Rating of resources in terms of importance in the development of chronic disease management within the service.

	Responder	Extremely important	Important	Not important
Specific payments for patients with a major chronic disease	HC (N=218; 96%)	46 (21.1%)	151 (69.2%)	21 (9.6%)
	GP (N=374; 95%)	292 (78%)	49 (13%)	33 (9%)
GP led CDM clinics	HC (N=221; 97.4%)	40 (18.1%)	154 (69.7%)	27 (12.2%)
	GP (N=370; 96%)	199 (54%)	110 (30%)	61 (16%)
Specialist nurse led clinics in the community	HC (N=222; 97.8%)	38 (17.1%)	165 (74.3%)	19 (8.6%)
	GP (N=374; 97%)	184 (49%)	108 (30%)	82 (21%)
Targeted funding for GPs as in the NHS model	HC (N=216; 95.2%)	29 (13.4%)	155 (71.8%)	32 (14.8%)
	GP (N=365; 96%)	244 (68%)	75 (20%)	46 (12%)
Increased practice nurse time for GP led clinics	HC (N=219; 96.5%)	24 (11%)	166 (75.8%)	29 (13.2%)
	GP (N=372; 96%)	232 (62%)	102 (28%)	38 (10%)

HC= Hospital Consultant; GP=General Practitioner

The majority of Hospital Consultants indicated that the following were either important or extremely important, for development of CDM within their service: GP led CDM clinics; specialist nurse led clinics in the community; targeted funding for GPs, as in the NHS model; increased practice nurse time for GP led clinics.

No demographic parameters played any role in the perception of the importance of resources for the development of CDM.

While there was broad consensus between Hospital Consultants and GPs with regard to facilitative factors for the future delivery of CDM, both groups gave the factors different weightings. Hospital Consultants were more likely to rate specific payments for patients with a major chronic disease, GP led CDM clinics, specialist nurse led clinics in the community, targeted funding for GPs like the NHS model and increased practice nurse time for GP led clinics as important, whereas GPs rate these facilitative factors as extremely important.

Respondents were asked to state their opinion with regard to Shared Care of chronic disease between General Practice and their own service.

Table 21: Hospital Consultants' opinion of shared care between General Practice and hospitals.

	Responder	Yes
Would you support a shared care initiative in CDM between your service and local GPs?	HC (N=227; 100%)	221 (97.4%)
	GP (N=376; 97%)	367 (98%)
Do you think there is a place for shared care in CDM between General Practice and the Hospital?	HC (N=225; 99.1%)	217 (96.4%)
	GP (N=372; 96%)	258 (69%)
Do you think a shared care initiative, between GP and the hospital, could be run by nurses?	HC (N=222; 97.8%)	131 (59%)
	GP (N=378; 98%)	373 (99%)
Are you currently involved in any shared care of a chronic disease?	HC (N=226; 99.6%)	101 (44.7%)
	GP (N=376; 97%)	168 (45%)

HC= Hospital Consultant; GP=General Practitioner

The majority of Hospital Consultants indicated that they would support a shared care initiative in CDM between their service and local GPs. The majority of Hospital Consultants indicated that they think there is a place for shared care in CDM between GPs and hospitals. Over half of Hospital Consultants indicated that they think a shared care initiative, between GPs and the hospitals, could be run by nurses. Forty four per cent of Hospital Consultants reported being currently involved in shared care of a chronic disease.

Demographic parameters played no role in the willingness of Hospital Consultants to having a shared care initiative in general, seeing a shared care initiative between their service and the local GPs, having a shared care initiative run by nurses, or their involvement in a shared care initiative currently.

Hospital Consultants and GPs are equally supportive of a shared care initiative in CDM between their own services. Hospital Consultants are more favourable than GPs towards a place for shared care in CDM between the hospitals and GP. Hospital Consultants are less inclined to see a shared care initiative between GPs and hospitals being run by nurses. Similar proportions of Hospital Consultants and GPs report being involved in shared care of a chronic disease.

If you are currently involved in Shared Care with General Practitioners, is it working?

Table 22: Opinion of Shared Care of those Hospital Consultants currently involved in Shared Care with GPs.

	Responder	Yes
If you are currently involved in Shared Care with General Practitioners, is it working?	HC (N=90)	61 (67.8%)
	GP (N=168)	125 (74%)

HC= Hospital Consultant; GP=General Practitioner

Although the majority of Hospital Consultants who reported being involved in shared care reported that they felt it was working, they were less likely than GPs to perceive that it was working.

Demographic parameters played no role in the perception of those Hospital Consultants currently involved in shared care.

Section Four: Discussion

The decision of how best to deliver chronic disease management in Ireland is a pertinent clinical and service related question during this time of healthcare reform. The most important aspect of this study is that it captures the insight of front line Hospital Consultants working in Irish healthcare. All data gathered are included in the report. It is therefore informed by responses from a representative group of Hospital Consultants, with all chronic disease related specialties participating. These are Senior Clinicians who work closely with patients. Results are communicated in a direct manner, with little interpretation. Views and beliefs expressed therefore are not those of an organisation, but of front line doctors, who can be assumed to be deeply interested in the wellbeing of their patients and the efficacy of their services. Strengths of the study include the use of an internationally validated instrument¹⁴ and a respectable response rate of 66%. The study uses the framework of The Chronic Care Model^{10,15}(CCM) increasingly recognised as an effective and patient centred conceptual approach to the management of patients with complex co-morbidities. The study is the second in a series of surveys on Chronic Disease Management (CDM), the first of which examined General Practitioners' perspectives⁸.

The majority of Hospital Consultants believe there are some good things in the current healthcare system but significant changes are needed to make CDM work better. The Government's major reform plans outlined in the Programme for Government² may bring some of these much needed changes.

The reported lack of availability of information technology (IT) for assisting with the routine tasks considered essential for good chronic disease management in the public hospital system is striking. The dearth of IT must be addressed as a pre requisite, before any other initiative in chronic disease management is undertaken involving Hospital based services. Attempting to address the challenges posed by an ageing population with complex co-morbidities by use of a paper filing system, based on handwritten medical records, is unthinkable and unconscionable. There are major differences in the use of information technology between Hospital Consultants and GPs. Improvement in IT is recognised as a pillar for healthcare reform within the Irish health service³ and thus much needed investment in IT resources within our hospitals for the benefit of patients and providers, enabling communication and integration of patient care, must take place as a priority.

The inequitable two-tiered system within the Irish healthcare system remains an issue. Both Hospital Consultants and GPs reported that their public patients often have difficulty in getting access to specialised diagnostic tests, experience long waiting times for treatment and have difficulty paying for medications or other out of pocket expenses. However Private patients are also not immune to experiencing difficulties in paying for medications and also experiencing long waiting times to see a Hospital Consultant.

Nearly all respondents indicated that they provide an out-of-hours service to their patients, with the majority indicating that they provide an onsite on call service.

Nearly all respondents indicated that they use guidelines; with two thirds of Hospital Consultants reporting regularly using evidenced based guidelines for the treatment of conditions that they deal with. The majority of Hospital Consultants inform both the patient and their family about risk factors relating to their condition.

Two-thirds of respondents indicated that they have completed a full audit cycle prior to 2011. In 2011 the Medical Council made clinical audit an obligatory part of continuing professional development. The fact that two-thirds of Hospital Consultants had performed an audit prior to the dictat of the Medical Council speaks to the professionalism of Hospital Consultants.

Only one quarter of Hospital Consultants report usually or always using a register to identify and track patient care and to remind patients about visits. Nearly half of respondents assist patients in setting and maintaining self-management goals. Over half of Hospital Consultants refer patients for education about their condition to someone within their hospital, with little evidence of referral of patients outside the hospital for education.

The CCM¹⁰ has gained respect and traction in many healthcare systems internationally. Given that it is patient centred, and also recognises the needs and role of all agencies in the provision of safe, effective, affordable and acceptable care for individuals with complex co-morbidities, it is the 'gold standard' we have adopted by which to evaluate data from this series of four studies on GPs (completed), Hospital Consultants (current) and Nurses and Patients (in progress). Use of active disease registers, effective recall systems, medication lists, use of electronic medical record systems, and effective provision of appropriate patient information are all key components of good chronic disease management. Based on our results, the access of Irish Hospital Consultants to these facilities appears particularly poor, and addressing these deficits as priorities is key to allowing Hospital Consultants in the near future to be more satisfied with the care they are able to provide to patients for whom they are responsible.

With respect to where and how Chronic Disease Management should be located and delivered, 45% of Hospital Consultant respondents are clear that it should be located outside of the Hospital setting and based in the Community. This is in keeping with the 2001 Health Strategy, but has yet to be achieved. Hospital Consultants favour CDM being delivered in the Community by Consultant led teams. Respondents indicated willingness for nurses, working under either Hospital Consultant or GP supervision, to be involved in CDM, but are presently against the service being delivered independently by Nurses.

The Chronic Care Model perspective is that services should be provided effectively, on a near patient basis, at the lowest level of cost and complexity. This means care is delivered in homes, villages and neighbourhood clinics. These considerations are most relevant in providing care to the frail elderly and to patients with complex co-morbidities, for whom travel, and concern for risk of infection, is important, and for whom ease of access and continuity of care are particularly valued.

The lack of effective communication between Primary Care and Secondary Care was cited as an important barrier to effective CDM. In a recent evaluation of the implementation of the Chronic Care Model in the Netherlands, raising the quality of communication and task integration among healthcare professionals was seen as the main reason that chronic illness care delivery improved to advanced levels¹⁶.

Hospital Consultants perceive that there is very inadequate co ordination of care between their own services and General Practice. This mirrors the experience of GPs. There is no agreed effective regional model for local co-operation between hospitals and primary care at Senior Clinician level (GP Principals and Hospital Consultants). We recommend that the Irish College of General Practitioners, The Royal College of Physicians of Ireland and The Royal College of Surgeons immediately agree a clear blueprint for such regional models, where each Hospital and the neighbouring ICGP Faculties commence and maintain a process of reflection and co operation, focused on the evolving needs of patients, which should include the collection of local data judged to be relevant by local health professionals, planners and patient representatives. If effective, they will build on local strengths and address weaknesses in the regional provision of services to patients. Multidisciplinary postgraduate medical training should be devised and implemented by the Colleges to facilitate improved integration of physicians during training years. The data reported here are supportive of such an initiative.

Since the current study commenced, a welcome addition to the National Clinical Care Programmes has been the addition of a Clinical Programme in the Prevention of Chronic Disease. This Programme aims to develop strategies to prevent chronic diseases such as cardiovascular disease, respiratory disease, diabetes, obesity and cancer.

This research can be viewed as a benchmark baseline of CDM, against which future progress can be measured. We believe that this work will be of use to policymakers and clinicians, and ultimately to patients, and that it might usefully inform the process of health service development in Ireland. It will be important to assess the perspectives of other key stakeholders including patients and nurses.

References

1. Comhairle na nDochtúirí Leighis, Medical Council. Annual Report & Financial Statements 2012 [Internet]. Dublin: Medical Council; 2013 May. Available from: <http://www.medicalcouncil.ie/News-and-Publications/Publications/Annual-Reports-Statistics-/Annual-report-2012.pdf>
2. Department of the Taoiseach. Programme for Government 2011 [Internet]. 2011. Available from: http://www.taoiseach.gov.ie/eng/Taoiseach_and_Government/Programme_for_Government/
3. Department of Health. Future Health. A Strategic Framework for Reform of the Health Service 2012-2015 [Internet]. 2012 [cited 2012 Dec 18]. Available from: http://www.dohc.ie/publications/Future_Health.html
4. World Health Organization. Noncommunicable Diseases Country Profiles 2011 [Internet]. Geneva; 2011. Available from: http://whqlibdoc.who.int/publications/2011/9789241502283_eng.pdf
5. Balanda KP, Barron S, Fahy L, McLaughlin A. Making chronic conditions count: Hypertension, stroke, coronary heart disease, diabetes. A systematic approach to estimating and forecasting population prevalence in Ireland. Dublin: Institute of Public Health in Ireland; 2010.
6. Samb B, Desai N, Nishtar S, Mendis S, Bekedam H, Wright A, et al. Prevention and management of chronic disease: a litmus test for health-systems strengthening in low-income and middle-income countries. *Lancet*. 2010 Nov 20;376(9754):1785–97.
7. Layte R, Barry M, Bennett K, Brick A, Morgenroth E, Normand C, et al. Projecting the impact of demographic change on the demand for and delivery of healthcare in Ireland. Dublin: Economic and Social Research Institute; 2009.
8. Darker C, Martin C, O'Dowd T, O'Kelly F, O'Shea B. Chronic disease management in general practice: results from a national study. *Ir Med J*. 2012 Apr;105(4):102–5.
9. Darker C, Martin C, O'Dowd T, O'Kelly F, O'Kelly M, O'Shea B. A national survey of chronic disease management in Irish general practice. 2011 Jun.
10. Wagner EH, Austin BT, Von Korff M. Improving outcomes in chronic illness. *Manag Care Q*. 1996;4(2):12–25.
11. World Health Organisation. Preventing chronic diseases: a vital investment [Internet]. [cited 2011 Feb 15]. Available from: http://www.who.int/chp/chronic_disease_report/en/
12. World Health Organisation. Innovative Care for Chronic Conditions: Building Blocks for Action. Geneva; 2002.
13. Commonwealth Fund. 2009 International survey of primary care doctors. [Internet]. 2009. Available from: <http://www.commonwealthfund.org/Content/Publications/In-the-Literature/2009/Nov/A-Survey-of-Primary-Care-Physicians.aspx>
14. Schoen C, Osborn R, Doty MM, Squires D, Peugh J, Applebaum S. A survey of primary care physicians in eleven countries, 2009: perspectives on care, costs, and experiences. *Health Aff (Millwood)*. 2009 Dec;28(6):w1171–1183.
15. E H Wagner. Improving Chronic Care [Internet]. 2009. Available from: <http://www.ihl.org/IHI/Topics/ChronicConditions/>
16. Cramm JM, Nieboer AP. In the Netherlands, rich interaction among professionals conducting disease management led to better chronic care. *Health Aff (Millwood)*. 2012 Nov;31(11):2493–500

Appendix: Survey Instrument

Department of Public Health & Primary Care, Trinity College Dublin and Royal College of Physicians in Ireland

National Survey of Specialist Chronic Disease Management

1. Which of the following statements come closest to expressing your overall view of chronic disease management (CDM) in our healthcare system?

- ☐ On the whole, the healthcare system works pretty well, and only minor changes are necessary to make CDM work better.
- ☐ There are some good things in our health system, but significant changes are needed to make CDM work better.
- ☐ Our healthcare system has so much wrong with it that we need to completely rebuild it for CDM.

2a. How often do your fee paying (private) patients experience the following?

	Often	Sometimes	Rarely	Never
a. Have difficulty paying for medications or other out-of-pocket costs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Have difficulty getting specialised diagnostic tests (e.g., CT imaging)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Experience long waiting times to see a hospital based specialist	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Experience long waiting times to receive treatment after diagnosis	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

2b. How often do your public patients experience the following?

	Often	Sometimes	Rarely	Never
a. Have difficulty paying for medications or other out-of-pocket costs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Have difficulty getting specialised diagnostic tests (e.g., CT imaging)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Experience long waiting times to see a hospital based specialist	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Experience long waiting times to receive treatment after diagnosis	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

3. What is your own clinical involvement with out of hours care (tick all that apply)?

- No clinical involvement ☐
- Usually provide telephone availability ☐
- Sometimes work on site on call ☐
- Regularly provide work on site on call ☐

4. In your Specialty, to what extent do you *routinely* use *written* evidence-based treatment guidelines in the conditions you most commonly treat?
- | | | | |
|-------------------------------|-------------------------------|-------------------------------------|--------------------------|
| Yes, Routinely use Guidelines | Yes, Sometimes use Guidelines | No, Do Not Routinely Use Guidelines | No Guidelines Available |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
5. Do you provide patients taking multiple medications (e.g. 5 or more) with a *written* list of their medications?
- ☐ Yes, routinely ☐ Yes, occasionally ☐ No
6. Do you give your patients with chronic diseases *written* instructions about how to manage their own care at home?
- ☐ Yes, routinely ☐ Yes, occasionally ☐ No
7. Prior to 2011, had you completed a full Audit Cycle within the last 5 yrs on 1 or more chronic diseases?
- ☐ Yes ☐ No
8. How often do you systematically advise patients about risk factors relating to their condition?
- ☐ Often ☐ Sometimes ☐ Rarely ☐ Never
9. How often do you advise family members of risk factors?
- ☐ Often ☐ Sometimes ☐ Rarely ☐ Never
10. Within your own service, other than doctors, does your service include any other healthcare providers?
- | | | | | | |
|---------------------------|--------------------------|--------------|--------------------------|---------------|--------------------------|
| Clinical Nurse Specialist | <input type="checkbox"/> | Psychologist | <input type="checkbox"/> | Team Manager | <input type="checkbox"/> |
| Receptionist | <input type="checkbox"/> | Dietitian | <input type="checkbox"/> | Counsellor | <input type="checkbox"/> |
| Administrator | <input type="checkbox"/> | Podiatrist | <input type="checkbox"/> | Social worker | <input type="checkbox"/> |
11. Please rate the strength of your agreement with the following statements:
- 1= Strongly disagree 2=Disagree 3=Neither agree/disagree 4=Agree 5=Strongly agree
- | | | | | | |
|---|---|---|---|---|---|
| I am happy with CDM as it is | 1 | 2 | 3 | 4 | 5 |
| I want to put more time and energy into CDM here on my service | 1 | 2 | 3 | 4 | 5 |
| Primary care teams will enhance the way chronic disease is managed | 1 | 2 | 3 | 4 | 5 |
| My hospital should put more time and energy into CDM | 1 | 2 | 3 | 4 | 5 |
| I am willing to share the CDM workload with GPs | 1 | 2 | 3 | 4 | 5 |
| CDM should take place largely at a general practice level and delivered largely by GPs | 1 | 2 | 3 | 4 | 5 |
| CDM should take place largely at a general practice level by nurses, under GP supervision | 1 | 2 | 3 | 4 | 5 |
| CDM should take place largely at a practice level by nurses working independently of GPs | 1 | 2 | 3 | 4 | 5 |
| CDM should take place largely in the hospital, delivered by specialist led teams | 1 | 2 | 3 | 4 | 5 |
| CDM should take place largely in the community, by specialist led teams | 1 | 2 | 3 | 4 | 5 |

12. How well is your service integrated with local GP practices?

☐ Not at all integrated ☐ Integrated ☐ Well integrated

13. Do your patients have effective local access to the following?

	Private	Public
Physiotherapist	<input type="checkbox"/>	<input type="checkbox"/>
Occupational therapist	<input type="checkbox"/>	<input type="checkbox"/>
Speech and language therapist	<input type="checkbox"/>	<input type="checkbox"/>
Podiatrist	<input type="checkbox"/>	<input type="checkbox"/>
Psychologist	<input type="checkbox"/>	<input type="checkbox"/>
Dietician	<input type="checkbox"/>	<input type="checkbox"/>
Social worker	<input type="checkbox"/>	<input type="checkbox"/>
Counsellor	<input type="checkbox"/>	<input type="checkbox"/>

14a. When patients have been referred to you privately, how often do the following occur?

	Always	Often	Sometimes	Rarely	Never
You receive a referral letter from the GP with all relevant information	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The information you require is available when needed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

14b. When patients have been referred to you publicly, how often do the following occur?

	Always	Often	Sometimes	Rarely	Never
You receive a referral letter from the GP with all relevant information	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The information you require is available when needed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

15. Do you routinely use electronic patient medical records on your service?

☐ Yes ☐ No

16. Do you use any of the following technologies in your practice?

	Yes, used routinely	Yes, used occasionally	No
a. Electronic ordering of laboratory tests	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Electronic access to your patients' laboratory test results	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Electronic alerts or prompts about ADRs or drug interactions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Electronic entry of clinical notes, including medical history and follow-up	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. Electronic prescribing of medication	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

17. How often does your service communicate with patients by email?

☐ Often ☐ Sometimes ☐ Rarely ☐ Never

18. How often does your service communicate with patients by SMS Text ?

☐ Often ☐ Sometimes ☐ Rarely ☐ Never

19. With the patient medical records system you *currently* have, how easy would it be to generate the following information about your patients?

					Is Process Computerised?	
	<i>Easy</i>	<i>Somewhat Difficult</i>	<i>Difficult</i>	<i>Cannot Generate</i>	<i>Yes</i>	<i>No</i>
a. List of patients by diagnosis (e.g. HTN)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. List of patients by lab result (e.g., HbA _{1c})	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Patients due or overdue for (e.g. Scope → 3 mths)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. List of all medications of a patient	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

20. Are the following tasks *routinely* performed on your service?

	Yes, using a computerised System	Yes, using a manual System	No
a. Patients are sent reminder notices (e.g., for routine check ups)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. All laboratory tests ordered are tracked until results reach clinicians	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. You receive an alert or prompt to provide patients with test results	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. You receive a reminder for guideline-based interventions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

21. How much of a problem, if any, are the following?

	Major Problem	Minor Problem	Not a Problem	Not Applicable
a. Shortage of specialist colleagues in your main centre of practice	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Amount of time you or your staff spends on administration.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Amount of time you spend coordinating care for your patients	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

22. How often do you currently use the following approaches to improving care for patients with chronic diseases?

1=Never, 2=Rarely, 3=Occasionally, 4=Usually, 5=Always

Use a register to identify and/or track care of your patients	1	2	3	4	5
Use a tracking system to remind patients about needed visits	1	2	3	4	5
Follow up patients between visits by telephone (you or staff)	1	2	3	4	5
Use published team guidelines as the basis for your management	1	2	3	4	5
Involve office staff in reminding patients in need of follow-up or other services	1	2	3	4	5
Assist patients in setting and attaining self-management goals	1	2	3	4	5
Refer patients to someone within your hospital for education about their condition	1	2	3	4	5
Refer patients to someone outside your hospital for education about their condition	1	2	3	4	5
Use flow sheets to track critical elements of care	1	2	3	4	5

23. Please rate the following in terms of your perceived importance as being barriers to the effective management of chronic diseases on your service:

1=Not important, 2=A little important, 3=Important, 4=Very important, 5=Extremely important

a. Lack of appropriate funding	1	2	3	4	5
b. Lack of skills and education / knowledge gaps	1	2	3	4	5
c. Poor communication between hospital teams and general practitioners	1	2	3	4	5
d. Increased workload / lack of time	1	2	3	4	5
e. Lack of ongoing access to sub specialists for advice	1	2	3	4	5

24. Please rate the following in terms of importance that would allow you to further develop CDM on your service:

1=Not important, 2=A little important, 3=Important, 4=Very important, 5=Extremely important

a. GP led CDM clinics	1	2	3	4	5
b. Specialist nurse led clinics in the community	1	2	3	4	5
c. Increased general practice nurse time for GP led clinics	1	2	3	4	5
d. Targeted funding for GPs as in the NHS model	1	2	3	4	5
e. Specific payments for patients with a major chronic disease	1	2	3	4	5

(E.g. COPD, CVD, Diabetes)

25. With regard to Shared Care of chronic disease between general practice and the hospital:

- a. Do you think there is a place for shared care in CDM between General Practice and the Hospital? ☐ Yes ☐ No
- b. Would you support a shared care initiative in CDM between your service & local GPs? ☐ Yes ☐ No
- c. Do you think a shared care initiative between GPs and hospital could be run by nurses? ☐ Yes ☐ No
- d. Are you currently involved in any shared care of a chronic disease? ☐ Yes ☐ No

26. If you are currently involved in shared care with GPs, is it working?

- ☐ Yes ☐ No ☐ Not applicable

27. Which of the following best describes your service?

- ☐ A single Consultant service
- ☐ A two Consultant service
- ☐ A three or more Consultant service

28. Where is your service located?

- ☐ City
- ☐ Suburban
- ☐ Small town
- ☐ Rural

29. Your age

- ☐ Under 35
- ☐ 35–49
- ☐ 50–64
- ☐ 65 or older

30. Your gender:

- ☐ Female
- ☐ Male

31. Please indicate your Specialty

- ☐ Endocrine
- ☐ Cardiology
- ☐ Respiratory
- ☐ Gerontology
- ☐ Nephrology
- ☐ Neurology
- ☐ Rheumatology
- ☐ Other

THANK YOU FOR YOUR TIME & CO-OPERATION

