Centre for Health Systems
and Technology (CHeST)
A UNIVERSITY OF OTAGO **RESEARCH THEME**

2019 Annual CHeST Symposium

Programme

Health systems, health services and
technology research at Otago:
the state of play in 2019

Wednesday 20 February
9.30am–5.15pm
OBS Seminar Room 1.17

Please register via
bit.ly/2zSy5ux
by Thursday 31 January.
All welcome.

Programme

9:30am – 10am	**Registration, tea and coffee**
10am – 10:05am	**Mihi Whakatau** Associate Professor Joanne Baxter Director, Kōhatu – Centre for Hauora Māori, University of Otago
10:05am – 10:15am	**Introduction** Professor Peter Crampton Kōhatu – Centre for Hauora Māori, University of Otago
10:15am – 10:25am	**CHeST brief / housekeeping** Professor Tim Stokes Co-Director, CHeST, Head of Department, Department of General Practice and Rural Health, University of Otago
10:25am – 11:10am	**Keynote Address 1**: *Envisioning the future of healthcare: how can research leverage the potential of data, technology and health system science?* Dr Jean-Frederic Levesque Chief Executive, NSW Agency for Clinical Innovation, Australia
11:10am – 11:15am	**Break**
Session One: Primary Health care Chair: Professor Tim Stokes	
11:15am – 11:30am	*The Waitangi Tribunal Kaupapa claims for Māori Health - implications for the New Zealand health system* Professor Peter Crampton Kōhatu – Centre for Hauora Māori, University of Otago
11:30am – 11:45am	*What free services do pharmacists offer? An investigation of unfunded pharmacy services provided by community pharmacies in New Zealand* Yasmin Abdul Aziz School of Pharmacy, University of Otago
11:45am – 12pm	*Providing care to former refugees: a qualitative study with general practitioners and practice nurses in Dunedin* Dr Lauralie Richard & Georgia Richardson Department of General Practice and Rural Health, University of Otago
12pm – 1pm	**Lunch**
1pm – 1:30pm	**Keynote Address 2**: *The Ministry of Health's new approach to telling the health system performance story* Andrew Inder Manager, Community and Ambulance, Health System Improvement and Innovation Ministry of Health, New Zealand
Session Two: Quality Improvement Chair: Professor Pauline Norris	
1:30pm – 1:45pm	*A System-Wide Quality Improvement Maturity Model Application in New Zealand Healthcare System* Adeel Akmal Department of Management, University of Otago
1:45pm – 2pm	*What initiatives do healthcare leaders agree are needed for healthcare system improvement? Results of a modified-Delphi study.* Stuart Barson Southern District Health Board
2pm– 2:15pm	*Interprofessional education at Otago for future health service provision: Concept, Vision, and Action!* Professor Sue Pullon Centre for Interprofessional Education, University of Otago
2:15pm – 2:20pm	**Brief break**

Session Three: Patient and Community Engagement Chair: Professor Tim Stokes	
2:20pm – 2:35pm	*Are we looking at rural wellbeing through the right lens?* Dr Fiona Doolan-Noble Department of General Practice and Rural Health, University of Otago Dr Shyamala Nada-Raja Department of Preventive and Social Medicine, University of Otago
2:35pm – 2:50pm	*A systematic scoping review of patient and public engagement in paediatric services in high-income countries* Dr Gagan Gurung Department of Preventive and Social Medicine, University of Otago
2:50pm – 3:05pm	*What should happen to our medical records when we die?* Dr Jon Cornwall Centre for Early Learning in Medicine, University of Otago
3:05pm – 3:25pm	**Afternoon tea**
Session Four: Management and Organisation Chair: Professor Robin Gauld	
3:25pm – 3:40pm	*A partnership approach to achieving a vision of sustainable health and care provision in rural New Zealand* Mark Hay Tuapeka Health Company and Tuapeka Health Incorporated Dr Lincoln Wood Department of Management, University of Otago
3:40pm – 3:55pm	*Production Planning in Health settings: Gaps, failures and potential benefits* Dr Richard Greatbanks Department of Management, University of Otago
3:55pm – 4:10pm	*Accounting Technologies in Healthcare organisations: The state-of-art and research agenda* Dr Konan A. Seny Kan Department of Accountancy and Finance, University of Otago
4:10pm – 4:15pm	**Brief break**
Session Five: Funding Chair: Professor Robin Gauld	
4:15pm – 4:30pm	*Out of pocket costs for medicines: A comparison of six countries* Professor Pauline Norris Centre for Pacific Health, University of Otago
4:30pm – 4:45pm	*Strengthening Health Systems in Lower- and Upper-Middle-Income Sub-Saharan African Countries through Universal Health Coverage Policies: Case of Ghana and South Africa* Dr Adam Fusheini Department of Preventive and Social Medicine, University of Otago
4:45pm – 5pm	*Creating personal and social EQ-5D-5L value sets for New Zealand using a new tool* Dr Trudy Sullivan Department of Preventive and Social Medicine, University of Otago
5pm – 5:15pm	**Roundup of the day and vote of thanks** Professor Peter Crampton Kōhatu – Centre for Hauora Māori, University of Otago

Keynote speakers

Dr Jean-Frederic Levesque

Chief Executive, NSW Agency for Clinical Innovation, Australia

Dr Jean-Frédéric Levesque joined the NSW Agency for Clinical Innovation (ACI), as Chief Executive in June 2017. He was previously Chief Executive of the Bureau of Health Information for four years.

Dr Levesque brings to the ACI leadership in healthcare system analysis and improvement, combining experience in clinical practice in refugee health and tropical medicine, in clinical governance and in academic research. He is a member of the Strategic Analytic Advisory Committee of the Canadian Institute of Health Information and a Fellow of the Royal College of Physicians of Canada in Preventive Medicine and Public Health. He has held senior positions responsible for publicly reporting information about the Canadian health system at the Institut National de Santé Publique du Québec and the Commissaire a la santé et au bien-etre du Québec.

Dr Levesque has a Doctorate in Public Health, a Masters in Community Health and a medical degree from the Université de Montréal, Canada. He is a Conjoint Professor at the Centre for Primary Health Care and Equity of the University of New South Wales. His research focuses on how different models of care impact on patient outcomes and experiences of care. In 2011-12, he was a Visiting Academic at the University of Melbourne. *(Source ACI website)*

Andrew Inder

Manager, Community and Ambulance, Ministry of Health, New Zealand

Andy is the Manager, Community and Ambulance, Service Commissioning, for the Ministry of Health. Andy's portfolios include responsibility for the strategic leadership and overall management of national programmes including primary care, community pharmacy, health of older people, national telehealth service, oral health and national ambulance service.

Previously Andy managed the New Zealand Workplace Injury Prevention Integration Programme at ACC, and has held a number of management positions in Catalyst Risk Management, an employee health and rehabilitation organisation, and NZ Post. He trained as a physiotherapist at the University of Otago.

The Waitangi Tribunal Kaupapa claims for Māori Health – Implications for the New Zealand health system

Peter Crampton, Gabrielle Baker, Jo Baxter

Kōhatu – Centre for Hauora Māori, University of Otago

Background: The Treaty of Waitangi guarantees Māori the right to tino rangatiratanga, and to equity, including health equity. These rights are yet to be realised. The Waitangi Tribunal is currently hearing a number of claims for Māori health as part of the Health Services and Outcomes Kaupapa Inquiry (Wai 2575).

One set of claims (Wai 2787) pertains to the failure of the Crown to deliver on the expectations specified in the Primary Health Care Strategy of 2001. The Strategy created expectation of improved equity for Māori. Although implementation risks in relation to Māori outcomes were identified early on, there was inadequate monitoring of the implementation process and necessary adjustments were not made in response to the identified risks. As a result, 18 years following the launch of the Strategy, the health system fails to properly meet the needs of Māori.

Key points and significance: This presentation will: 1) summarise the evidence related to the primary health care claims, 2) summarise future related claims under the Wai 2575, and 3) examine the implications of the Waitangi Tribunal process for health policy, with special reference to the Health and Disability System Review that is currently underway.

What free services do pharmacists offer? An investigation of unfunded pharmacy services provided by community pharmacies in New Zealand.

Yasmin Abdul Aziz, Susan Heydon**,** Stephen Duffull**,** Carlo Marra
Dunedin School of Pharmacy, University of Otago, New Zealand

Background information:
To complete and fulfil the healthcare needs of the community there is anecdotal evidence of pharmacists providing free clinical services. Limited literature exists identifying these services.

Purpose:
To characterise the types of services which pharmacies offer that are not reimbursed by the government or through patient payments.

Method:
Semi-structured focus group discussions were conducted with community pharmacists in New Zealand about the types of services they provide for which no remuneration is received. Discussions were transcribed verbatim. Recurring patterns and regional differences in unfunded services were identified. Descriptive data was coded using QSR International Nvivo 11 for Windows.

Results:
Twenty-four pharmacists, were interviewed across five regions in New Zealand. Key themes identified were: unfunded services, exclusively funded services and leakages from the funding model. Pharmacists reported that the provision of unfunded services accounted for 15%-50% of their daily activities. Pharmacists stated that these services often led to reduction of disease progression and improved quality of life.

Conclusion:
It appears that pharmacists offer many professional services without remuneration. In some cases, these services make up a substantial part of the pharmacist's time. A reduction in pharmacy income from other sources may put these services at risk.

Providing care to former refugees: A qualitative study with general practitioners and practice nurses in Dunedin

Lauralie Richard, Tim Stokes, Chrys Jaye, **Georgia Richardson**
Department of General Practice & Rural Health, University of Otago

Refugee health is a global health issue. Robust evidence informing refugee health service delivery to enhance culturally responsive and accessible health care and reduce health disparities for refugees living in New Zealand is lacking. This qualitative study explored PHC professionals' accounts of providing care to refugees in the Southern Health District.
Semi-structured interviews were conducted with 9 general practitioners and 6 nurses from Dunedin general practices enrolled in the Refugee Resettlement programme. Interviews were audio recorded, transcribed and validated. Transcripts were subjected to thematic analysis. All data were double coded. A thematic framework was developed inductively and refined through discussions with the research team.

Thematic findings relate to relational engagement with refugees, refugee health care delivery, and providers' professional role shaped by complexity. Service-level experiences pertained to the time-consuming nature of refugee care supported by use of interpreter services, the fragmented interface with other services, the use of culturally appropriate delivery arrangements to maximise service responsiveness, challenges relating to critical health infrastructure, and the business model of general practice in NZ.
The results of this study highlight opportunities to enhance equitable and culturally responsive access to PHC and reduce unmet needs for refugees through service transformation and integration.

A System-Wide Quality Improvement Maturity Model: Application in New Zealand Healthcare System

Adeel Akmal, Richard Greatbanks, André M. Everett
Department of Management, University of Otago

Whilst the concept of quality improvement has only recently gained attention in New Zealand Healthcare, it has been a prominent feature of industry for more than six decades. Over this time the diverse quality improvement frameworks/methodologies and maturity models disseminated in the literature have been considerable, each considering some aspect of quality improvement while excluding others. This paper presents a concerted attempt to create a health care-based quality improvement maturity model, derived from holistic principles which support the successful implementation of a system-wide quality improvement programme. The maturity model was intentionally created to avoid reliance on any single quality improvement framework or methodology.

The maturity model presented is designed after analysis of the international case-based extant literature, and offers a longitudinal view of the micro-details of processes within a health organisation and its development of its external supply network. The maturity model consists of four different types of maturities: capabilities, process, supply chain and philosophical maturity. These are presented as progressing through six stages: identification, ad-hoc, formal, process driven, optimised enterprise and finally way of life.
his model can serve a *descriptive purpose* if it is used for as-is assessments; a *prescriptive purpose* if it is used as a guide to achieve a desirable state of maturity in the future; and a *comparative purpose* when it is used for benchmarking.

What initiatives do healthcare leaders agree are needed for healthcare system improvement? Results of a modified-Delphi study.

Stuart Barson[1], Robin Gauld[2]
[1]*Southern District Health Board*
[2]*Otago Business School, University of Otago*

The purpose of this study was to identify five quality improvement initiatives for healthcare system leaders, produced by such leaders themselves, and to provide some guidance on how these could be implemented. A multi-stage modified-Delphi process was used, blending the Delphi approach of iterative information collection, analysis and feedback, with the option for participants to revise their judgments. The process reached consensus on five initiatives: (i) Change information privacy laws; (ii) Overhaul professional training, starting in the workplace; (iii) Use co-design methods; (iv) Contract for value and outcomes across health and social care; and (v) Use data from across the public and private sectors to improve equity for vulnerable populations and the sickest people. Information could not be gathered from all participants at each stage of the modified-Delphi process, and the participants did not include patients and families, potentially limiting the scope and nature of input. The practical implications are a set of findings based on what real-world leaders would bring to a decision-making table if given broad scope and capacity to make changes to improve healthcare systems. This study adds to the literature a suite of recommendations for healthcare quality improvement, produced by a group of experienced healthcare system leaders from a range of contexts.

Interprofessional education at Otago for future health service provision: Concept, Vision, and Action!

Sue Pullon[1.2], Margot Skinner[1.3], Fiona Doolan-Noble[1.4], Eileen McKinlay[1.2], Louise Beckingsale[1.5], Aynsley Peterson[1.6], Ashley Symes[1]
[1]*Centre for Interprofessional Education, University of Otago*
[2]*Department of Primary Health Care and General Practice, University of Otago, Wellington*
[3]*School of Physiotherapy, University of Otago*
[4]*Department of General Practice and Rural Health, University of Otago*
[5]*Department of Human Nutrition, University of Otago*
[6]*School of Pharmacy, University of Otago*

Interprofessional Education (IPE) is essential to prepare health and social care professional students to be collaborative-ready and effective in meeting societal needs for high-quality, cost-effective sustainable health systems, delivered through new models of health care. The University of Otago has ten pre-registration health professional degree programmes. The Division of Health Sciences' strategic plan emphasises integration of IPE longitudinally into curricula as an intentional, staged, cumulative process, and emphasises collaboration between health and social care professional groups in complementary university programmes and with other tertiary institutions.

Internationally recognised theoretical frameworks, New Zealand imperatives, and Māori and Pacific models of health and wellbeing, inform our dynamic conceptual model, which articulates a common vision across health and social care professions, fostering continued interprofessional dialogue essential for ongoing engagement at: institution-institution, programme–programme, staff-staff levels to acknowledge differences, and negotiate potential conflict, during curriculum design, implementation, assessment and evaluation processes.

Coordinated IPE learning activities and modules are rapidly growing to meet the needs of several thousand health and social care professional students. Mounting clinically-based programmes is the greatest challenge. We describe lessons learned from established IPE learning modules and outline a vision for establishing "an interprofessional ward", a forerunner for future health service provision.

Are we looking at rural wellbeing through the right lens?

Fiona Doolan-Noble[1], **Shyamala Nada-Raja**[2]
[1]*Department of General Practice and Rural Health, University of Otago*
[2]*Department of Preventive and Social Medicine, University of Otago*

This study by the Rural Aotearoa Research Network (RAOR) examined whether a deficit view of rural health and wellbeing was held by rural adults themselves, by surveying a convenience sample of 171 adults (90 women and 78 men; 3 non-responses for gender).

Most men and women (79% and 76%) were highly satisfied with their quality of life, with youth (81%) reporting the highest satisfaction. Participants were less satisfied with the quality of rural health services. More men (74%) than women (67%) reported good social support networks, and time to pursue their favourite hobby and were less likely to report sleep issues. Youth (17-24 years) and those older than 65 years were also highly satisfied with their social networks and more likely to agree they had time for their favourite hobby than other age groups. Those aged 25-64 years reported more sleep issues. People's partners or GP were the preferred people to discuss mental health concerns with, except for youth for whom their mates were preferred before GPs.

These preliminary findings suggest rural health and wellbeing needs to be viewed from a broader lens, acknowledging that rural residents' own perspectives ought to inform health service provision and health promotion activity in their communities.

A systematic scoping review of patient and public engagement in paediatric services in high-income countries

Gagan Gurung[1], Amy Richardson[1]**,** Emma Wyeth[1,4], Liza Edmonds[2,3], Sarah Derrett[1,5]
[1]*Department of Preventive and Social Medicine*
[2]*Children's Health and NICU, Neonatal Paediatrician, Southern District Health Board*
[3]*Department of Women's and Children's Health*
[4]*Ngāi Tahu Māori Health Research Unit*
[5]*Injury Prevention Research Unit*

Background

Patient and public participation in paediatric healthcare decision-making is an under-researched area (Coyne, 2008) and there is a lack of consolidated and systematically reviewed literature in this area.

Aim

The aims of this study are to:

1. Identify existing literature about patient and public participation in paediatric services from New Zealand and other high-income countries,
2. Summarise and map the extent, range, and nature of research related to patient and public engagement in paediatric services; and
3. Synthesise key approaches to patient and public engagement in paediatric services in high-income countries.

Review methods

The literature review method used was a scoping review (Arksey & O'Malley, 2005). Four electronic databases (MEDLINE, EMBASE, PsycINFO and CINAHL) were used to capture literature focused on engagement in paediatric services. Different search terms (keywords or phrases) related to the concepts of: 1) patient and public engagement, and 2) paediatric health care settings were tested and then "Boolean logic" was used to identify relevant literature. Guided by the project aims, we included all types of studies describing patient and public engagement activities in the paediatric health care setting in high-income countries (defined by the World Bank). Only journal articles written in English and published between 1990 and December 2017 were included.

Titles and abstracts of all articles retrieved using the search strategy were uploaded into Endnote to form a database. All the duplicates were removed. Then all the articles were uploaded into Rayyan QCRI (a free web/mobile application that helps for screening) to conduct the remaining review process. One reviewer (GG) reviewed the titles and abstracts using inclusion/exclusion criteria, and full-text versions of all potentially eligible studies were accessed. Full-text articles have been screened by two reviewers (GG and AR) independently. Two reviewers (GG and AR) have extracted data independently using a standardised data extraction form, and discrepancies were identified and resolved through discussion (with additional reviewers, SD and EW, where necessary).

Results and conclusion

A total of 4,331 of citations were obtained by the initial search. After restricting the search to the availability of an abstract, and English language, 3,492 remained. Then titles and abstracts of all citations found were combined to form a database in Endnote, and 827 studies were removed due to duplication. After the examination of titles and abstracts of all remaining 2,665 studies, a total of 287 papers were retained for full paper review. Of these, 23 met the inclusion criteria following a full text reading and data extraction.

Of the 23 studies reviewed, 21 of the studies were published in or later than 2000. In terms of geographical distribution, the United States is the leading site for research (n=15), followed by the UK (n=5), Sweden (n=1), Canada (n=1), and Italy (n=1). No studies were reported in Australasia (Australia and New Zealand). Participants in the reviewed studies were most commonly parents/caregivers/family members of children who were seeking healthcare, followed by health workers and children. Of the 23 studies included, 16 were quantitative, 4 were qualitative and 3 were mixed methods studies. The most common research design employed within quantitative studies was experimental. Qualitative and Mixed-methods studies used various combinations of methods. Various patient and public engagement strategies were used, including shared decision-making tools, questionnaires, youth councils, family advisory groups, and patient portals, among others.

Detailed analyses are in progress. The final report will provide a short descriptive summary (numerical summary included), which includes information such as the overall number of studies included, types of study design, years of publication, types of interventions, characteristics of the study populations, and countries where studies were conducted. Using qualitative thematic analysis, we will present synthesised findings structured around the type of patient and public engagement strategies, type of outcomes and impact resulting from these engagement strategies, and facilitators and barriers associated with the implementation of engagement strategies.

Funding

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References

Arksey, H., & O'Malley, L. (2005). Scoping studies: towards a methodological framework. International journal of social research methodology, 8(1), 19-32.

Coyne, I. (2008). Children's participation in consultations and decision-making at health service level: a review of the literature. International Journal of Nursing Studies, 45(11), 1682-1689.

Hsieh, H.-F., & Shannon, S. E. (2005). Three approaches to qualitative content analysis. Qualitative health research, 15(9), 1277-1288.

What should happen to our medical records when we die?

Jon Cornwall[1]

[1]*Centre for Early Learning in Medicine, University of Otago*

Digital innovation is transforming healthcare, and the digital healthcare data being generated will have increasing research utility over time. Despite the seemingly logical and inevitable application of healthcare data from deceased persons for research and healthcare both now and in the future, the issue of how best to manage posthumous medical records is currently unclear. This includes elements of resource governance, issues of law, and infrastructural challenges. Our current work explores the views of the general population to the use of posthumous medical records. Using focus groups (10 x 6-person, 1-hour, age-groups from 18-65+ years-old) we explored issues relating to use of this resource, governance, anonymity, law, and commercialisation. Transcriptions of focus groups were analysed thematically. Findings indicated strong support for posthumous healthcare data use, with beneficence a strong theme. As a resource, a centrally collated and Government-governed resource of posthumous healthcare data was almost universally supported, with varying caveats around how such a resource should be utilised. Family rights to data of the deceased were not universal, with limited case-by-case access supported. Current challenges including development of an ethically and culturally appropriate governance system, alterations to current law to protect this resource, and implementation of a fit-for-purpose technology infrastructure.

A partnership approach to achieving a vision of sustainable health and care provision in rural New Zealand.

Mark Hay[1,2], Andrew Gray[1], Gaye Cowie[1], Garry McCorkindale[1,2], Larissa Brown[2], Quentin Currall[1,], Suzanne Stephenson[1,2], Ray McDonald[2], Konica Ponsaby**, Lincoln Wood[3]** Fiona Doolan-Noble[4]

[1]*Tuapeka Community Health Company Ltd*

[2]*Tuapeka Health Inc*

[3]*Department of Management, University of Otago*

[4]*Department of General Practice and Rural Health, University of Otago*

With many New Zealand rural hospitals facing environmental and funding uncertainty, how will the Ministry of Health and the twenty District Health Boards fulfil their mandate [to promote and protect the health of their populations and to reduce health disparities] in the face of increasing devolution of health services to cities or larger provincial centres? The Tuapeka Community Health Company (TCHC), alongside Tuapeka Health Incorporated are a rural health care provider whose future is uncertain. With the establishment of the Rural Aotearoa Research Network (RAOR) in 2017 the Board of TCHC reached out to RAOR for support and guidance. Over the course of a year representatives of the Board had face to face meetings and e-mail discussions with RAOR representatives. This presentation describes the innovative outcome of this partnership of community understanding and insight and researcher's awareness of alternative models of health care delivery. The new model supports not only healthcare but also social wellbeing in Lawrence and the surrounding area, in particular it supports the care of the frail elderly who are especially disadvantaged by hospital admission.

Production Planning in Health settings: Gaps, failures and potential benefits

Richard Greatbanks[1], Lincoln Wood[1], Adeel Akmal[1], Nigel Copson[2] and Allan Cumming[2]
[1]*Department of Management, University of Otago.*
[2]*Southern District Health Board*

The importance of managing resources and capacity in health care settings has been highlighted by the difficulties in achieving rates of desired throughput for elective surgery. The use of the term '*Production Planning*' has gained popularity within the New Zealand health sector, particularly in relation to the planning and use of critical resources such as operating theatres. However, when examined in detail, the use of this term in health appears to be more perfunctory and based on scheduling or resource planning for a narrowly defined components of the system, such as the physical operating theatre itself, rather than to describe the collective group of resources necessary to undertake an elective surgery procedure. Within a manufacturing context, production planning approaches serve to plan and manage all resources and capacities required over the full range of the system.

In this paper we initially contrast the system elements of production planning needed from a manufacturing perspective, with those elements found in a health resource planning context in order to highlight the gaps and similarities in both approaches. We then further analyse the implications of these identified gaps and consider how a more aligned production planning approach might provide benefits in a health setting by taking a systems-level view of the healthcare delivery process. We finally present a preliminary conceptual model, which allows this issue to be considered from a health-setting perspective.

Accounting Technologies in Healthcare organisations: The state-of-art and research agenda

Konan A. Seny Kan[1]
[1]*Department of Accountancy and Finance, University of Otago*

How are performance measure and management implicated in decision-making process and behaviours in healthcare organisations such as hospitals? This broad question is the foundation of a prominent and topical accounting research area - Performance Management Systems (PMS) within healthcare organizations. This healthcare industry is increasingly subject to institutional pressures, in both developed and developing countries, that lead to a set of organizational changes, the first of which is the introduction or adoption of management accounting and control tools. Yet, these tools may have unexpected consequences in a context that traditionally do not has accounting and financial performance as a goal. Moreover, the implementation performance tools can be difficult for different key reasons, including their specific roles and purposes. In fact, performance control tools are, in practice, devices aimed at controlling the behaviour of the organization's stakeholders. These tools play several functions, ranging from support functions for decision-making processes to control and coordination functions. The uses of these tools can also have symbolic, negotiating and even personal ends. Through this research, which reviews the extant accounting healthcare research, I develop a framework for a future research agenda. Indeed, I view this research as a first step toward the development of an impactful research program on healthcare performance measure and management at the University of Otago.

Out of pocket costs for medicines: A comparison of six countries

Pauline Norris[1], Catherine Herd[2], Simon Horbsurgh[3]
[1]*Centre for Pacific Health, University of Otago*
[2]*WellSouth*
[3]*Department of Preventive and Social Medicine, University of Otago*

Health systems in most countries contribute significantly towards the cost of medicines for at least some people. This study examines how effective the health systems in six OECD countries (Australia, Canada, England, Finland, Germany or New Zealand) are in protecting citizens from the cost of medicines.
A series of model patient scenarios (with varying ages, income types, and medical conditions) were used to determine the cost of prescription medicines as a proportion of patient income. Prices paid by each model patient were then compared using purchasing power parities.
Model patients spent from 0% to over 50% of their income on medicines. Young adult patients, those with low incomes, and those with metastatic renal cell carcinoma (our example of a rare cancer treated with expensive medicines) were

at risk of spending a high proportion of their income on medicines. Some model patients were exempt from medicine costs because of age, medical condition or income type. Patients in Canada generally paid more than those in other countries, while patients in England paid the least.

There was considerable variation in out-of-pocket costs across the countries and conditions included. Co-payment systems in some countries were more effective at protecting patients from high medicines costs.

Strengthening Health Systems in Lower- and Upper-Middle-Income Sub-Saharan African Countries through Universal Health Coverage Policies: Case of Ghana and South Africa

Adam Fusheini[1]
[1]*Department of Preventive and Social Medicine, University of Otago*

Universal Health Coverage (UHC) is at the centre of current efforts at strengthening health systems, improving access to and making health services available, particularly, in lower and upper-middle-income countries. Yet the policy pathways of countries to UHC are many and varied-making it a contested rather than a universal model. Ghana and South Africa, lower and upper-middle-income countries, respectively, have both adopted national health insurance (NHI) as vehicles to UHC with different implementation strategies. Ghana is viewed as a UHC leader in sub-Saharan Africa. South Africa has a long and rich history of several proposals and attempts at UHC yet at an early phase of implementation. The objective of this paper is to explore the different policy implementation pathways towards UHC in order to provide lessons for other lower and upper-middle-income countries. In a qualitative desk review, national health and NHI policy documents would be reviewed and analysed, and triangulated with the World Bank and WHO country case study documents, published peer-reviewed papers and other grey literature on NHI/UHC. We conclude that largely, population coverage, cost of, and the package of services-both general and service-specific, and service readiness of providers define the varied and different policy pathways to attaining UHC.

Creating personal and social EQ-5D-5L value sets for New Zealand using a new tool

Trudy Sullivan[1], Paul Hansen[2], Sarah Derrett[1], Franz Ombler[3], Nancy Devlin[4]
[1]*Department of Preventive and Social Medicine, University of Otago*
[2]*Department of Economics, University of Otago;*
[3]*Department of Computer Science, University of Otago;*
[4]*Office of Health Economics, London*

The EQ-5D is a standardised instrument used to measure health-related quality of life (HRQoL), an essential component in most health economic evaluations and much health outcome research. It is the most commonly-used HRQoL instrument in New Zealand (NZ) and internationally. Different methods are used to ascribe a 'weight' (i.e. a value) to each level within each of the five dimensions of the EQ-5D. A new tool for creating these values has recently been developed and trialled in NZ.

The tool is based on applying the PAPRIKA method, a type of adaptive, full factorial discrete choice experiment. The method, which learns from and adapts to each participant's preferences, involves participants pairwise ranking health states defined on two EQ-5D dimensions at a time and involving a trade-off. After being extensively tested and refined, the tool was administered in an online survey to a representative sample of NZ adults (N=5112).

The results show that the new valuation tool is feasible and acceptable to participants. A NZ EQ-5D-5L social value set suitable for use in cost utility analysis and as a patient-reported outcome measure is currently being finalised. As well, the personal value sets created by the tool will enable the preferences of sub-groups of the population to be explored.