Sefydliad Ymchwil Iechyd a Meddygol Bangor

PRIFYSGOL BANGOR UNIVERSITY

Bangor Institute for Health & Medical Research

North Wales Centre for Primary Care Research
Canolfan Gogledd Cymru ar gyfer Ymchwil Gofal Cychwynnol

PRIFYSGOL BANGOR UNIVERSITY

Development and first application of the Primary Care Clusters Assessment (PCCA) in Wales

January 2018

Authors

Dr Marian Andrei Stanciu, North Wales Centre for Primary Care Research, Bangor University

Dr Rebecca-Jane Law, North Wales Centre for Primary Care Research, Bangor University

Dr Rachel Parsonage, North Wales Centre for Primary Care Research, Bangor University

Margaret Hendry, North Wales Centre for Primary Care Research, Bangor University

Diana Pasterfield, North Wales Centre for Primary Care Research, Bangor University

Dr Julia Hiscock, North Wales Centre for Primary Care Research, Bangor University

Dr Nefyn Williams, North Wales Centre for Primary Care Research, Bangor University

Professor Clare Wilkinson, North Wales Centre for Primary Care Research, Bangor University

Version: 1.1; 19 February 2018

Contents

Funded by Public Health Wales

Public Health Wales is an NHS organisation providing professionally independent public health advice and services to protect and improve the health and wellbeing of the population of Wales. Production of this report was funded by Public Health Wales. **However, the views in this report are entirely those of the authors and should not be assumed to be the same as those of Public Health Wales.**

Executive Summary

Introduction

Wales introduced 64 'primary care clusters' in April 2014, serving 30,000-50,000 patients, in order to improve the strength and functioning of Welsh primary care services. Each cluster groups several adjacent general practices with the aim of developing local planning of health services for the patient population they serve. The autonomy and authority of clusters to shape local service provision during these early years continued to be overseen by Health Boards, though general practices and community agencies were encouraged to provide input and drive delivery. As recognised in a recent inquiry of the National Assembly for Wales into the primary care cluster, it is essential to understand how primary care clusters are achieving their aims, monitor the progress made, feedback barriers and opportunities, and highlight differences and changes both cross-sectionally (between clusters/health boards) and longitudinally (over time). It is a challenge to know how to measure the effectiveness of the clusters, and the studies described here are part of an effort to evaluate this new model.

Aims

This programme of work explores the maturity of clusters and strength of primary care at a local level by:

(1) understanding the Cluster Leads' views on the maturity of the primary care clusters;

(2) identifying methods and tools to assess primary care systems which are relevant for Wales;

(3) developing a novel instrument for the assessment of primary care clusters in Wales; and

(4) piloting the assessment instrument to quantitatively assess the maturity of the primary care clusters from the perspective of the Cluster Leads.

Results

Interviews with Cluster Leads revealed they were generally positive about the potential impact of primary care clusters on primary care provision across Wales. Regional and national-level challenges exist, and efforts to address them were judged by Cluster Leads to have variable success. Cluster Leads identified support needs in areas where primary care has been traditionally vulnerable (e.g., recruitment, funding, autonomy, and integration) and further specific areas where improvement is needed (e.g., communication with and within health boards, finance and human resources processes within health boards, governance and statutory relations with other health and social care agencies).

Quantitative methods to assess primary care systems have been developed internationally in recent years, but are not directly applicable to Welsh primary care clusters. We identified the most relevant international assessment framework of primary care (PC Monitor) and adapted it for use at cluster level in Wales. Informed by international literature, a broad range of primary care clusters stakeholders, primary care practitioners and academics, developed a new set of indicators to measure the strength of primary care at cluster level along 11 dimensions (10 from the PC Monitor framework, and Cluster Organisation) describing the structure, process and outcome of primary care in Wales, at cluster level. This new assessment instrument (Primary Care Clusters Assessment)

collects the ratings of Cluster Leads about their own cluster, on a visual analogue scale from 0-100, and was first piloted in Wales.

Overall PCCA scores were similar across most clusters in Wales, but there was a high variability between clusters' ratings on individual dimensions. The moderate variability on structure-level dimensions (e.g., Governance, and Economic conditions) reflected different relationships of clusters with the same health board, or the implementation of government policy perceived differently by clusters, often in the same health board. This may have been influenced by local health board service development policies, or differences in the ways health boards (or departments within health boards) perceive and interact with different primary care clusters.

Process-level dimensions registered the greatest variability. Comprehensiveness of care was the highest scoring dimension overall, and the Continuity of care dimension was the lowest scoring. This finding corroborates other international reports that measured continuity of care to be the lowest scoring dimension of the primary care in the United Kingdom countries as a whole.

Among outcome-level dimensions, Efficiency of care was the highest scoring and second highest overall (after comprehensiveness of care). Most Cluster Leads rated the efficiency of their cluster in the "medium" or "high" range. However, equity of care was the third lowest dimension overall, and showed great differences between clusters.

Overall Conclusions

The PCCA is the first systematic assessment of primary care clusters in Wales on all major recognised dimensions of primary care. It benefits from an established assessment framework and a content developed together with a broad range of primary care stakeholders. However, these results are limited to the perspective of the Cluster Leads only, and cannot represent a definitive assessment of the clusters.

The PCCA could be further transformed into a 360 degrees assessment. This would allow the assessment of the clusters from a multiagency perspective, and involve obtaining assessments from all the relevant agencies that are represented at the cluster meetings (e.g., health care, social care, third sector organisations, etc.). Also, the data could be analysed in the context of other routinely collected clinical, demographics and cluster maturity indicators. Finally, a regular assessment of all primary care clusters, using am augmented 360 degrees version of the PCCA would allow benchmarking the progress of individual clusters and health boards in improving the local planning and delivery of primary care services.

Background

It is widely accepted internationally that effective and comprehensive primary care services are the foundation of an efficient, equitable and cost-effective healthcare service. Growing evidence has suggested that primary care strength improves when provider organisations are 'scaled up' to cover larger population groups than has been traditionally the case in Wales (Addicott & Ham, 2014; Kringos et al., 2013a). One model of scaling up in primary care involves groups of general practices working together as clusters. It is anticipated that this may be more effective and cost-effective than traditional, independent small general practices.

The Welsh Government recognised the need for a different model of primary care to address the ongoing workload and workforce challenges and set out the concept of GP services being co-ordinated on a "locality basis" in 'Setting the Direction (2010)', supported also by 'Together for Health' (2011). In 2015, the Welsh Government published "Our plan for a primary care service for Wales up to March 2018". It emphasised "planning care locally" as one of the five priority areas of its approach. Building on previous locality or network models in Wales, and the international evidence base, the cluster model was developed.

The NHS in Wales was reorganised into 7 single local health organisations that are responsible for delivering all healthcare services within a geographical area in 2009 (NHS Wales, 2017). Clusters were established consisting of a group of GP practices within the local health boards' area of operations. A Cluster Lead for each, most commonly General Practitioners (GPs) were appointed by the health boards. The aims of the cluster model were to improve the coordination of care, the integration of health and social care, and the collaborative working with local communities and networks to reduce inequalities in health (NHS Wales, 2015). These changes to the primary care structure in Wales were underpinned by five core principles, which were outlined in the Welsh Government national plan for primary care in Wales in 2014 (Welsh Government, 2015): (1) Prevention, early intervention and improving health, not just treatment; (2) Co-ordinated care where GPs work closely with specialists and wider support in the community to prevent ill-health, reduce dependency and effectively treat illness; (3) Active involvement of the public, patients and carers in decisions about their care and wellbeing; (4) Planning services at a community level of 25,000-100,000 people; (5) Prudent healthcare principles.

Under this structure general practices within each cluster are required to agree a joint action plan (Cluster Network Plan), with relevance to other providers, which would enable clusters to improve previous work in relation to outpatient referrals, emergency admissions and risk profiling of patients at significant risk of unscheduled admissions to secondary care. The specific actions featured in each cluster's network plan are driven and developed locally, and clusters are held to account for delivery of the action plan.

Beginning in April 2014, the Quality and Productivity (QP) domain of the Quality and Outcomes Framework (QOF) in Wales was replaced by a new GP Cluster Network Development (CND) domain (Welsh Government, 2014). This new framework was designed to enable practices to strengthen their ability to work together as a cluster, defined geographically and by the government. In addition, QOF indicators came into use to assess the cluster initiative at each practice level. In 2015, four areas were identified as requiring specific actions in the Cluster Network Plan: (1) access arrangements (benchmarking access arrangements, including capacity and demand analysis; exploration of adjuvants to access and user experience); (2) greater integration of the delivery of health and social care; (3) new approaches in the delivery of primary care which might aid service delivery (e.g., new

technologies, developing clinical roles, multi-disciplinary teams); (4) support for ambulance services in relation to care homes and Emergency Departments (NHS Wales, 2015). Practices are required to participate in at least four cluster meetings during the year to review progress and delivery of the Cluster Network Plan. Local health boards are expected to proactively respond to issues raised by clusters in relation to barriers and/or opportunities emerging from their work. Practices are required to develop and submit a Cluster Network Annual Report, and health boards are expected to record the progress in service delivery made by clusters (NHS Wales, 2015).

The Health, Social Care and Sport Committee of the National Assembly for Wales (2017) recently published their enquiry into the working of the primary care clusters. The findings noted that achieving the initially envisaged systemic change required further progress and continued support from the Welsh Government. Promising examples of work were identified in individual GP practices and clusters across Wales, but these appeared to be driven by local enthusiasm and commitment of individual staff. Some professional groups expressed concern regarding their lack of inclusion in the cluster work. General Practitioners and other health professionals faced ongoing challenges in attending to clusters work; citing work pressures, and the risk of reduced clinical contact time. There was little engagement between clusters and secondary care professionals. Practical difficulties such as the short term nature of cluster development money, the lack of legal entity status of clusters, employment issues, and professional indemnity made it difficult to recruit and retain staff. Importantly, it was found that the current primary care estate and information technology (IT) infrastructure were not able to easily accommodate the cluster model of working. The committee encouraged efforts by the Welsh Government to allow clusters to have a significant impact on the delivery of primary care, and formulated 16 recommendations to contribute towards this end. Among these, are calls for the Welsh Government to publish a refreshed model for primary care clusters and guidance relating to their governance framework, explicit terms of reference, suggested core membership, and decision-making process. These findings are complementary to the work reported here.

The aim of the work programme presented here is to explore the development and impact of the cluster initiative. Due to the potential for clusters to improve care, it is of interest and importance to understand how clusters are developing, and examine progress around driving change locally. This tool is needed, alongside the CND and QOF, as it specifically measures the views of clusters leads regarding cluster maturity, identifying areas of both strength and need.

This is achieved through (1) a deeper understanding the Cluster Leads' views on the maturity of the primary care clusters, improvements achieved, and impact; (2) a systematic review of established methods and tools for assessing the impact of primary care systems and their relevance for Wales; (3) the development of a self-assessment instrument based on an established framework with contributions from a broad range of stakeholders or primary care clusters; and (4) piloting the assessment instrument to quantitatively assess the maturity of the primary care clusters, and allow benchmarking and continuous feedback from the perspective of the Cluster Leads.

Method

The Primary Care Clusters Assessment (PCCA) was developed in four stages: (1) qualitative interviews with Cluster Leads; (2) systematic literature review of instruments to assess primary care systems; (3) evaluation among primary care experts and practitioners; (4) piloting of the PCCA for the 64 clusters in Wales.

Cluster Leads' views on maturity and impact of clusters (Work Package 1)

Between February and April 2016, 22 Cluster Leads (7 female; 15 male), representing 34% of primary care clusters across Wales took part in the interview study. Cluster Leads represented clusters ranging from 3-15 general practices and from all seven health boards in Wales. One Cluster Lead was an Advanced Nurse Practitioner and the rest were General Practitioners. The evaluation consisted of semi-structured telephone interviews. Two data coders identified recurrent themes, manually (i.e., using printed transcripts), in two stages, firstly determining overall themes, and secondly, more specific trends and patterns in the data. The analysis employed a thematic framework approach (Ritchie & Spencer, 1994), and involved identifying a thematic framework, indexing and charting participants' answers, and interpreting the findings (Ritchie, Spencer, & O'Connor, 2003).

Literature review of primary care assessment models (Work Package 2)

We updated a previous comprehensive systematic review (Kringos et al., 2010) to describe the core dimensions of primary care and assess their relevance to outcomes. We appraised their list of included studies to identify if any met our inclusion criteria, modified their search strategy to meet the needs of our review, and, since their searches were completed in 2008, we limited our searches to 2008 onwards. The search strategy was developed for Medline and adapted for the remaining databases (Embase, Cochrane Library, CINAHL, King's Fund database, IDEAS database and EconLit). Included studies were set in countries with primary care systems comparable to that in the UK and focussed on measuring or evaluating the impact of primary care systems. The method of measurement or evaluation had to be fully described.

The development of the Primary Care Clusters Assessment (PCCA) tool (Work Package 3)

The PCCA tool was developed drawing on potential primary care system indicators identified in the Cluster Leads interviews and the frameworks presented in the studies included in the literature review (Work Package 2). An expert group (including health services researchers and general practice academics and practitioners) reviewed the indicators in three separate consultation exercises. Two additional workshops (in Cardiff and Wrexham) with a broad primary care clusters stakeholder representation further refined the PCCA tool. Participants at each workshop worked in groups of 4-6 to review the indicators. Comments (including rewording or re-allocation of indicators) were collected in writing, and also reported to the group for discussion. The two workshops were audio recorded. After the workshop, the authors collated all workshop comments, and online feedback and finalised the PCCA instrument.

The first application of the Primary Care Clusters Assessment (PCCA) tool (Work Package 4)

Between June and August 2017, 38 Cluster Leads (representing 40 clusters) from all seven health boards in Wales, completed the PCCA survey online. All questions were presented in a visual analogue scale format with the use of an electronic slider which could be positioned anywhere within the answer range (0-100). Twenty-eight of the 53 questions were reverse scored to reduce possible response bias. Overall PCCA and dimension scores were calculated as averages of their respective indicator ratings. Results were classed into three groups: "low" [0-33], "medium" [34-66], and "high" [67-100].

Results

Cluster Leads' views on maturity and impact of clusters (Work package 1)

Interviewed Cluster Leads suggested that clusters had the opportunity to enhance local primary care services, despite administrative barriers in the relationship with health boards and occasional difficulties in engaging with other agencies in the community. There were high levels of variation in terms of engagement across clusters and the general practices within clusters. Achievements were often limited by the lack of cluster autonomy, lack of timely access to funding, inadequate administrative arrangements and other bureaucratic delays. However Cluster Leads were able to identify many innovative projects across all of Wales. There was uncertainty about the future of clusters and their funding arrangements. Despite some occasional local innovations, for the most part Cluster Leads felt that engagement with patient-level data was under-developed. Commonly suggested areas for improvement included increased funding to primary care overall, the need to address the underlying GP staffing crisis, a call for increased governance and autonomy, new models for staff sharing, a call for measurements of cluster impact, a need for technical and leadership support, and suggestions for a best practice sharing programme for Wales. Although the interviews covered a comprehensive range of topics related to the functioning of primary care clusters, they reflect only the view of a selected sample (approximately 33%).

Literature review of primary care assessment models (Work Package 2)

A total of 9,652 publications were identified through database searching. After removing 1,582 duplicate records, the titles of 8,070 publications were screened. The full text of 20 publications was retrieved and assessed for eligibility by two independent reviewers. Discrepancies were settled by consensus and mediated by a third reviewer. Six studies were identified by the review process to meet the inclusion criteria and are included in the qualitative synthesis.

The review identified a landmark study (PC Monitor) assessing the strength of primary care across the European countries (Kringos et al, 2013b) and five further reports of instruments able to measure aspects of primary care systems. The PC Monitor benefited from the most comprehensive framework from the studies included in the review, and was recommended for future development of the PCCA tool. The remaining studies included in the review provided insight into how the assessment framework can be further be improved (e.g., to reflect organisation level indicators – later to be included in the novel "Cluster Organisation" dimension), and to provide a pool of indicators to be classified and adapted for Wales.

The development of the Primary Care Clusters Assessment (PCCA) tool (Work package 3)

The final version of the PCCA consists of a 53 indicators covering 11 dimensions. These include the 10 dimensions of the European PC Monitor: Governance, Economic conditions, Workforce development, Access to primary care, Continuity of care, Co-ordination of care, Comprehensiveness, Quality of care, Efficiency of care, and Equity, (Kringos et al., 2013b) and a newly created dimension (Cluster organisation), which stemmed from the review work (Work Package 2) and was further supported by the workshops in Work Package 3 (see Table 1).

Table 1. *The levels and dimensions of the Primary Care Clusters Assessment (PCCA).*

Levels	Dimensions
Structure	1. Governance 2. Economic conditions 3. Workforce development
Process	4. Access to care 5. Continuity of care 6. Coordination of care 7. Comprehensiveness of care 8. Cluster organisation
Outcome	9. Quality of care 10. Efficiency of care 11. Equity of care

The first application of the Primary Care Clusters Assessment (PCCA) tool (Work Package 4)

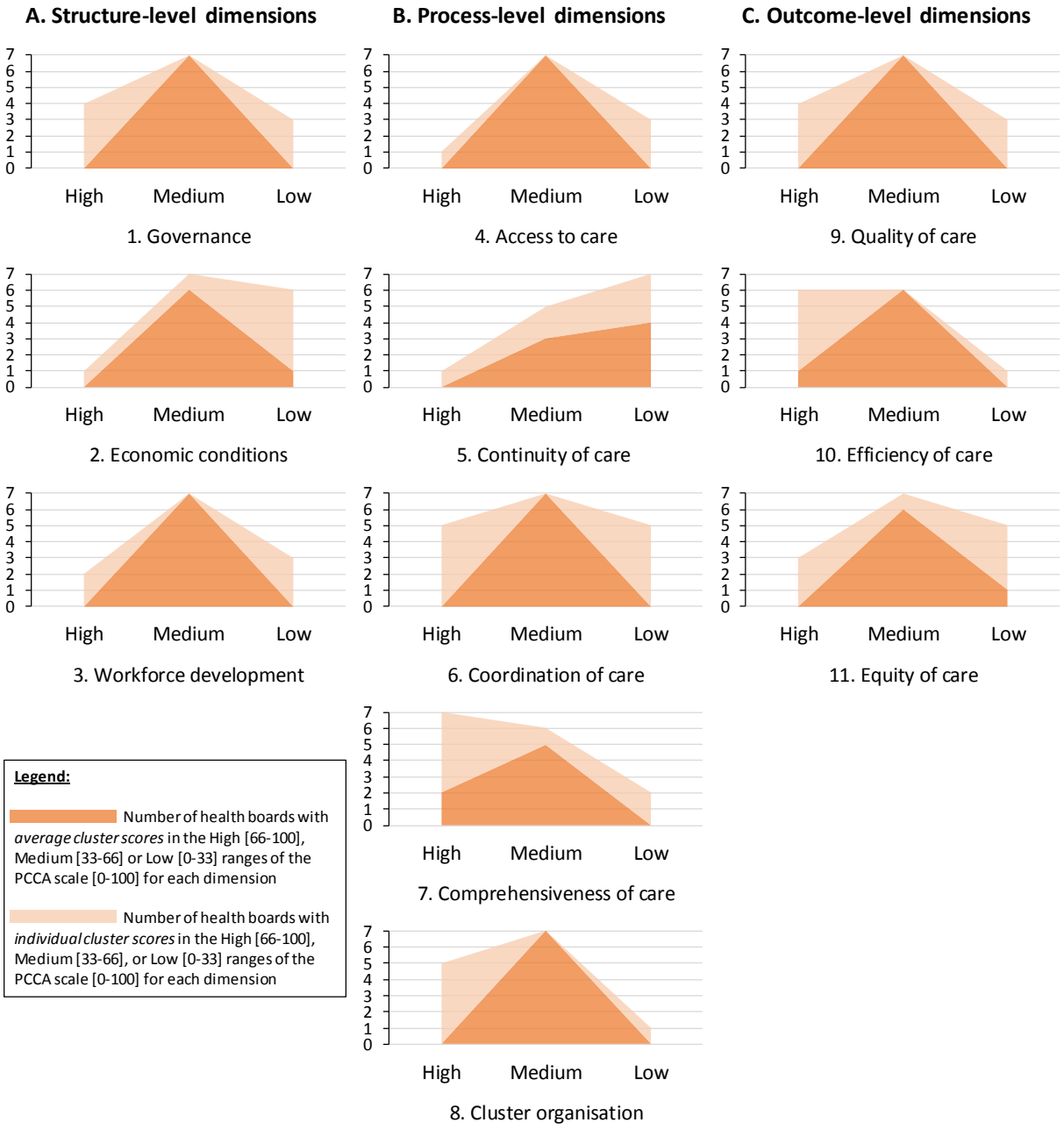
The overall PCCA scores (average of all dimensions) for most clusters in Wales were in the medium range [34-66], but there was a high variability between dimension scores [1-88] between clusters. This seems to indicate that regardless of the overall score, each cluster reported areas of strength and areas for improvement.

Structure-level scores (i.e., Governance, Economic conditions and Workforce development dimensions) were similar to the PCCA average, and showed moderate variations between clusters within the same health board. This trend was replicated for each individual structure-level dimension.

Process-level scores across health boards were lower than the overall PCCA average, but still within the “medium” range. The “Continuity of primary care services” dimension was lowest scoring overall. The “Comprehensiveness of primary care” dimensions was on average the highest scoring. The novel dimension, Cluster organisation, scored higher than the PCCA overall score, and contained relatively little variation between clusters in each health board. This is likely an encouraging picture, suggesting that the development of clusters is largely homogenous in terms of operational organisation across health boards. Access to primary care services and Coordination of primary care services dimensions showed similar scores to the overall PCCA score, in the “medium” range, for all health boards.

Outcome-level scores (referring to Quality, Efficiency and Equity dimensions) were similar to the overall PCCA average for all health boards. Notably, the scores for the “Efficiency of primary care” dimension were higher than the PCCA average (and second highest dimension overall, after Comprehensiveness of primary care services).

Figure 1. The number of health boards in Wales with average cluster scores (dark-orange) and individual cluster scores (light-orange) in the High [66-100], Medium [33-66], and Low [0-33] ranges of the Primare Care Clusters Assessment (PCCA) scale, per dimension of primary care (as reported by Cluster Leads for their own cluster). Dimensions are presented in three columns according to the level of primary care which they assess: A. Structure; B. Process; C. Outcome. Comprehensiveness of care is the highest scoring dimension overall, and Continuity of care is the lowest scoring overall. The remaining dimensions are relatively similar, and cover the middle of the range, with varying degrees of variability (the higher the light-orange areas, the greater the variability between clusters in Wales).



Discussion

These four packages of work represent the development and first application of an empirical measurement tool to assess the maturity of primary care clusters in Wales, from the perspective of Cluster Leads. Pending further validation, this instrument could allow the benchmarking of the impact of clusters on the local planning and provision of primary care services, and offer a platform on which to develop a comprehensive 360 degrees assessment of the clusters. Moreover, this work has international relevance for comprehensive and developed health care systems, where primary care provision is planned and delivered locally at the levels comparable to Wales (30,000-50,000 people).

Summary of findings

The Cluster Leads who took part in the telephone interviews were positive about the impact of primary care clusters across Wales. Regional and national-level challenges to the clusters' work exist, and progress in addressing them is variable, if often unsatisfactory. Cluster Leads identified support needs in areas where primary care has been traditionally vulnerable (e.g., recruitment, funding, autonomy, and integration) for clusters to achieve their full potential. Additionally, the creation of primary care clusters highlighted further specific areas where improvement is needed (e.g., communication with and within health boards, finance and human resources processes within health boards, governance and statutory relations with other health and social care agencies).

The assessment of primary care systems is complex, but effective tools have been developed internationally in recent years. Work of critical importance has been published in the last five years concerning international evaluations of primary care systems in Europe. At the same time efforts are ongoing in other parts of the world, including in Canada and the United States to evaluate the delivery of primary care services. The models of evaluation of primary care systems most relevant for Wales are those developed in Europe, notably the work led by Dionne Kringos (2013b). This involves the evaluation of primary care systems along three levels: structure, process and outcomes. The framework and developmental methodology used by Kringos and colleagues (2013) were adopted and expanded in the present work. Following the literature review of tools and consultation and engagement exercises with key partners in primary care in Wales, a series of indicators were identified to correspond to each dimension, and specific indicators have been developed and piloted, in a measurement instrument called the PCCA. Although not readily suitable for use in Wales, these tools provided an essential framework and the major elements for the development of a tool customised for evaluating the impact of the new primary care cluster structure in Wales.

All the clusters represented in the PCCA survey, across all health boards, appear to have found their own path towards maturing. The Comprehensiveness of care and Efficiency of primary care dimensions scored highest overall, while the Continuity of care dimension scored lowest. The operational organisation of clusters seems to be a strength in all health boards. Among structure-level dimensions, there is a great variability between clusters across Wales, and often between clusters in the same health board in terms of their rating of individual dimensions (e.g., Governance, and Economic conditions). These dimensions reflect the clusters' relationship with the same health board and the implementation of government policy. Empirical explanations for these variations are beyond the scope of this assessment, but they highlight an important area of study regarding the relationship between the larger and established organisations of the health boards, and the newly formed primary care clusters. Working hypotheses about the different experience of clusters in the same health board regarding their governance, support received from health boards, and access to cluster funding could be: (1) overriding local health board service development policies; (2)

perceived maturity and profile of different primary care clusters within key departments within health boards.

The process-level dimensions scored below the PCCA average, in particular, Continuity of primary care services. The indicators of the PCCA direct the Cluster Lead to consider and rate the distinct contribution of the cluster, for each dimensions, thus the results may or may not represent a judgement of the service. However, Continuity of care is known to be the lowest scoring dimension of the primary care in the United Kingdom as a whole (Kringos et al., 2013).

Finally, the outcome-level dimensions identified further strengths for the clusters. Notably, the Efficiency of primary care at cluster level was assessed to be generally higher than other dimensions (second highest scoring dimension after Comprehensiveness) by all Cluster Leads, and exceptionally high in many clusters – evenly spread between all health boards. This contrasted with ratings of Equity of care – which was the third lowest dimension overall, and showed a high variability across clusters, with many clusters reporting a great scope for improvement. Interestingly, the Efficiency dimension showed that clusters where primary care practices had been considered at risk reported some of the highest scores. This finding could be linked to efforts to improve practice in lower scoring areas, but further work is needed to establish such relations.

Comparison with similar and ongoing assessments or similar primary care structures

In other United Kingdom countries (e.g., Scotland and Northern Ireland), primary care is beginning to follow the organisation into clusters, but their development is several years behind Wales, and similar assessment initiatives to the PCCA have not been undertaken. The Clinical Commissioning Groups (CCGs) in England are the nearest organisational structures to the Welsh clusters, but they benefit from a notably broader scope and slightly longer history. However, the assessment of CCGs poses similar challenges to that of the primary care clusters in Wales, and the PCCA seems to bridge the gaps in the range of approaches taken in England.

Assessments of CCGs in England followed three broad approaches: (1) case study designs (Checkland et al., 2013) allowing a deeper probing of select few organisation, (2) cross-sectional surveys of the entire population of CCGs/GPs in England (Moran et al., 2016) – but covering a substantially reduced range of measures and aspects of primary care (at least compared to the PCCA); and (3) annual 360 degrees stakeholder assessments (Ipso-Mori, 2016) – which benefit from the views of a range of CCG members, covered specific indicators of CCGs activity (e.g., engagement of members, leadership, commissioning decisions, working relationships, engaging of patients, quality assurance, etc.). Notably, the case studies (Checkland et al., 2013) followed similar, if not all, dimensions as the PCCA (e.g., CCG autonomy and decision making: structures and governance; engagement with members; and quality of primary care). Cross-sectional surveys have achieved greater coverage of the CCGs (49%), and in the same range as the PCCA in Wales (60% of clusters), but lacked the breadth to assess the strength of the entire primary care system (Moran et al., 2016). The 360 degrees assessment had a similarly high response rate (59%) as the PCCA, and uniquely benefitted from the views of a range of stakeholders from each CCGs. This is a remarkable methodological strength of and can serve as a model for the future development of the PCCA. The content of the 360 degrees assessment provides further elements of strength, with specific sections of the assessment being adapted to individual categories of stakeholders. However, this approach limited the ability to integrate the ratings of different stakeholders into a summary score for each CCGs and allow a comparative assessment at the level of each organisational unit. The 360 degrees

assessment only summarised data at regional level (e.g., South, North, Midlands and East), where differences were less likely to be observed.

The PCCA can directly compare individual primary care clusters and offers the option to further explore, as a separate investigation, examples of best practice. Conversely, this model of analysis can reveal which clusters are scoring lower overall, or in specific dimensions of primary care, which enables health boards to target specific and prompt measures to address imbalances in the development of clusters and areas of need. The breadth of indicators used in the 360 degrees assessment in England covered specific activities related to commissioning of services, but did not address systematically the entire primary care system (and indeed had not been designed to do so at this stage of development). This limits the ability to group indicators by specific dimensions of primary care – as was done in the PCCA – and inform broad areas of policy change (e.g., governance, workforce development, access to primary care services, efficiency, equity, etc.). Lastly, the yearly frequency of the 360 degree assessment further enabled time series benchmarking and analysis of the evolution of the CCGs overall. This would be particularly beneficial for the PCCA.

Internationally, organisations in developed health care systems are looking for integrated ways of planning and delivering care at population levels similar to primary care clusters in Wales (30,000-50,000 patients). Subsequently, the assessment of primary care systems and structures is attracting increasing attention. The literature benefits from: (1) a history of assessments at organisational level (primary care practices, community medicine, and other individual care services), and (2) recent efforts to measure the strength of primary care at national or health care system-level. The PCCA addresses the space in between individual primary care organisations and national health systems, which are becoming increasingly important for health policy planners and large health care provider organisations. Regardless of the specific format and responsibilities of such intermediate-level structures in other health care systems, the PCCA provides a model and a resource for assessment of primary care strength at the level of each individual unit.

Strengths and limitations

The PCCA is the first comprehensive instrument to allow a systematic assessment of primary care clusters in Wales on all key dimensions of primary care from the perspective of Cluster Leads. It builds on an established primary care assessment framework and its content has been developed by a broad range of primary care stakeholders. In future, following a broader validation, the PCCA could allow benchmarking of the development of primary care clusters from the perspective of the Cluster Leads. However, the work should not be seen as a definitive assessment of clusters. It is a snapshot from a singular perspective, and the picture it generates can be strengthened in several important ways.

Firstly, the PCCA can be transformed into a 360 degrees instrument, allowing the assessment of the clusters from a multiagency perspective. This would involve obtaining assessments from all the relevant agencies that are represented at the cluster meetings (e.g., health care, social care, third sector organisations, etc.).

Secondly, the PCCA data should be analysed in the context of other routinely collected clinical, demographics and cluster maturity indicators. This can help explore and explain associations between ratings of key primary care dimensions, and variations between clusters from the same health board, or with similar demographic characteristics (serving a predominantly rural or socio-economically deprived area).

Thirdly, the PCCA instrument is able to identify clusters that need more support, health-board level challenges, and variations between and within individual dimensions of primary care. However, the instrument is only able to measure and benchmark those clusters completing the assessment, thus the completion rate and continuity of the assessment remain important considerations. The 360 degrees assessment of CCGs in England is a methodological example of implementing a large scale assessment across a wide geography. By comparison, Wales is a relatively smaller country and fewer primary care clusters. The inclusion of an updated version of the PCCA (following improvements and learning points identified in the present work), as a regular assessment of primary care clusters would provide a complete snapshot of all clusters in Wales. The assessment could take place annually and allow the benchmarking of the progress of individual clusters and health boards in improving the local planning and delivery of primary care services.

Implications for research and practice

The involvement of Cluster Leads and the wide range of primary care cluster stakeholders in the development of the PCCA has offered a communication platform for a broad range of views on the development and current status of the clusters. The participation and interest in the project have been above expectations and suggest a continued need for engagement and dialogue between primary care service users, front line providers and health boards support structures. This is expected to have a positive effect on the general communication within clusters and between clusters and health boards, and across Wales.

We hope that the results of this first assessment and the opportunities for further development of the PCCA (especially in a 360 degrees model) will improve the information available to national policy makers and local partners about the development of the clusters and contribute to finding ways to increase the strength of primary care in all parts of Wales. This is particularly the case for a longitudinal assessment which will allow benchmarking. The development of the PCCA and its associated findings will allow change to be monitored, areas of need to be identified and best practice to be shared.

The dissemination of the present findings, although limited to the views of Cluster Leads, is important. We anticipate the findings will be of interest to national health policy organisations and health boards. However, the involvement of local front line primary care providers and patients is paramount for the development of the clusters. The overall picture of the maturity of primary care clusters in Wales is positive. The communication of this project can help raise the profile of the primary care clusters, promote their accomplishments and strength, and encourage stakeholders to address areas where improvement is needed. This will increase the confidence of local stakeholders in the cluster model, and help attract the energy and participation of a wider range of members at cluster meetings and in common projects. All participants in the project will receive a summary of findings.

Finally, this tool may have application in other countries with a strong primary care base, where care is planned and organised at similar scales; and measurement is needed for continuous quality improvement.

References

Addicott R, Ham C. Commissioning and funding general practice: Making the case for family care networks. 2014. Kings Fund. , [Available at: https://www.kingsfund.org.uk/sites/files/kf/field/field_publication_file/commissioning-and-funding-general-practice-kingsfund-feb14.pdf], Accessed on: 25 November, 2016]

Amando CAEF, dos Santos SP. Challenges for performance assessment and improvement in primary health care: The case of the Portuguese health centres. *Health Policy*, 2009;91:43–56. doi:10.1016/j.healthpol.2008.11.008

Anderson NR, West MA. Measuring climate for work group innovation: development and validation of the team climate inventory. *J Organ Behav*, 1998;19:235–58.

Beaulieu MD, Haggerty J, Tousignant P, Barnsley J, Hogg W, Geneau R, et al. Characteristics of primary care practices associated with high quality of care. 2013. *Canadian Medical Association Journal (CMAJ)*, 2013;185(12). DOI:10.1503/cmaj.121802

Boada-Grau J, Diego-Vallejo R, de Llanos-Serra E, Vigil-Colet A. [Short Spanish version of Team Climate Inventory (TCI-14): development and psychometric properties]. *Psicothema*, 2011;23(2):308-313.

Bower P, Campbell S, Bojke C, et al. Team structure, team climate and the quality of care in primary care: an observational study. *Qual Saf Health Care,* 2003;12:273–9.

Campbell SM, Hann M, Hacker J, Burns C, Oliver D, Thapar A, Mead N, Gelb Safran D, Roland MO. Identifying predictors of high quality care in English general practice: observational study. *BMJ*, 2001;323:784. doi: http://dx.doi.org/10.1136/bmj.323.7316.784

Goh TT, Eccles MP. Team climate and quality of care in primary health care: a review of studies using the Team Climate Inventory in the United Kingdom. *BMC Research Notes*,2009;2:222. DOI: 10.1186/1756-0500-2-222

GPone. Cluster Network Development Domain. Last updated: 29 September 2015, [Available at: http://www.gpone.wales.nhs.uk/cluster-network-dd], Accessed on: 27 January, 2016]

Kringos DS, Boerma WGW, Hutchinson A, van der Zee J, Groenewegen PP. The breadth of primary care: a systematic literature review of its core dimensions. BMC Health Services Research 2010, 10:65. http://www.biomedcentral.com/1472-6963/10/65

Kringos DS, Boerma W, van der Zee J, Groenewegen P. Europe's strong primary care systems are linked to better population health but also to higher health spending. *Health Aff (Millwood)*. 2013a Apr;32(4):686-94. doi: 10.1377/hlthaff.2012.1242.

Kringos DS, Boerma W, Bourgueil Y, Cartier T, Dedeu T, Hasvold T, et al. The strength of primary care in Europe: an international comparative study. *Br J Gen Pract,*2013b Nov;63(616): e742–e750.

Lemieux-Charles L, McGuire WL. What Do We Know about Health Care Team Effectiveness? A Review of the Literature. *Med Care Res Rev,*2006 June;63(3), 263-300. doi: 10.1177/1077558706287003

Levesque JF, Pineault R, Provost S, Tousignant P, Couture A, da Silva RB, Breton M. Assessing the evolution of primary healthcare organizations and their performance (2005-2010) in two

regions of Québec province: Montréal and Montérégie. *BMC family Practice*, 2010;11(95), http://www.biomedcentral.com/1471-2296/11/95

Mathisen GE, Einarsen S, Jorstad K, et al. Climate for work group creativity and innovation: Norwegian validation of the team climate inventory (TCI). *Scand J Psychol*, 2004;45:383–92.

National Assembly for Wales – Health, Social Care and Sport Committee. (2017). Inquiry into Primary Care: Clusters. Available from: http://www.assembly.wales/en/newhome/pages/newsitem.aspx?itemid=1768&utm_medium=social&utm_campaign=SocialSignIn&utm_source=Twitter [Accessed on 21 December 2017]

NHS Wales. (2017). Health in Wales. Available from: http://www.wales.nhs.uk/nhswalesaboutus/structure [Accessed on 21 December 2017]

Ouwens M, Hulscher M, Akkermans R, Hermens R, Grol R, Wollersheim H. The Team Climate Inventory: application in hospital teams and methodological considerations. *Qual Saf Health Care*, 2008;17:275–280. doi:10.1136/qshc.2006.021543

Ragazzoni P, Baiardi P, Zotti AM, et al. Italian validation of the team climate inventory: A measure of team climate for innovation. *J Manage Psychol*, 2002;17:325–36.

Ritchie J, Spencer L. Qualitative data analysis for applied policy research. In: Bryman A, Burgess RG, eds. *Analyzing qualitative data.* 1994. Routledge, London: 173–94.

Ritchie J, Spencer L, & O'Connor W. Carrying out Qualitative Analysis. In: Ritchie J & Lewis J, Eds. *Qualitative Research practice.* 2003. SAGE, London: 219-263.

Schäfer WLA, Boerma WGW, Kringos DS, de Ryck E, Greß S, Heinemann S, et al. Measures of quality, costs and equity in primary health care: instruments developed to analyse and compare primary health care in 35 countries. *Qual Prim Care*, 2013;21(2):67-79.

Szecsenyi J, Campbell S, Broge B, Laux G, Wilms S, Wensing M, Goetz K. Effectiveness of a quality-improvement program in improving management of primary care practices. *Canadian Medical Association Journal (CMAJ)*, 2011;183(18). DOI:10.1503/cmaj.110412

Thomas K, Myres P, Brown G, Wilkinson C, & Howson H. Primary care: rapid review of models and policies. 2014. Accessed on 25 November 2015. Available at: http://www.gpone.wales.nhs.uk/sitesplus/documents/1000/Primary%20care%20models%20and%20policies-%20rapid%20review%20July%202014%20FINAL.pdf

Welsh Government. Primary care services for Wales up to March 2018. 2015. Accessed on 20 January 2016. Available at: http://gov.wales/topics/health/nhswales/plans/care/?lang=en (see also http://gov.wales/docs/dhss/publications/151106plannedprimarycareen.pdf and http://gov.wales/docs/dhss/publications/150218primaryen.pdf)

Welsh Government. Quality And Outcomes Framework Guidance for the GMS Contract Wales 2014/15. 2014. Available at: http://www.wales.nhs.uk/sites3/page.cfm?orgid=480&pid=73976, Accessed on: 20/08/2016, Last updated: 19/05/2015.