Opportunities for innovations

Context

The West Midlands Academic Health Science Network (WMAHSN) has a defined process for addressing the region's health delivery needs and challenges through asking for outcome-focused innovation proposals that can be received and agreed with our partners throughout the year. This document provides you with an overview of the areas in which we are interested in seeking to pull innovation proposals.

WMAHSN criteria

Proposals will be shortlisted against the following criteria:

- Regional scalability
- Fit with WMAHSN priorities and business plan
- Clear deliverables, outcomes measures and quality indicators
- Evidence of support across the region
- Patient/carer involvement
- Consistency with other WMAHSN themes
- Fit with the NHS Outcomes Framework
- Evidence of additional investment.

Priority – Medicines optimisation and adherence

It is estimated that between a third and a half of prescribed and dispensed medicines (e.g. tablets, syrups, ointments, capsules, inhalers, creams, eye drops and suppositories) are not used as recommended. Non-adherence and underuse represents a loss to patients, the healthcare system and society at large, as it is a lost opportunity for health improvement and a waste of valuable resources for healthcare systems. Adherence presumes an agreement between the prescriber and the patient about the prescriber's recommendations for medications and is defined as the extent to which the patient's actions match the agreed recommendation.

Non-, or partial, adherence can be due to a variety of factors but often is a result of a failure of the prescriber to fully agree the prescription with the patient in the first place and to appropriately support the patient once the medicine has been dispensed. Non-adherence falls into two overlapping categories:

- Intentional – the patient decides not to follow the treatment recommendations because, for example, because of side effects.
- Unintentional – the patient wants to follow the treatment recommendations but has practical problems in doing so. For example, poor recall or difficulties in understanding the instructions, problems using or affording the treatment or simply forgetting to take it.

To better understand and therefore address factors that influence motivation to start and continue treatment, it is necessary to have:

- An open 'no blame' approach that encourages patients to discuss any doubts or concerns about treatment with an informed healthcare professional e.g. prescriber or community pharmacist

- A patient-centered approach that encourages informed adherence
- Identification of perceptual and practical barriers to adherence at the time of prescribing and during regular reviews. Improving medicines adherence is a wide ranging topic and the potential solutions to address the challenges are likely to come from a wide range of approaches.

The WMAHSN would like to focus on key areas for future programmes of work that consider the challenges of:

- **Getting the right information to the right people at the right time including patients and carers, as well as healthcare professionals**
  - Programmes need to focus on how to help empower patients and their carers to access the information they need and encourage healthcare professionals to listen to what their patients say is important to them about taking or not taking their medicines. Health professionals need to understand that patients may make different decisions in how they manage their condition and therefore want support to use medicines effectively in a way that suits them.

- **Overcoming physical, cultural, language and mental barriers**
  - Physical – people may have poor eyesight or poor dexterity.
  - Cultural and social – people may prefer to listen to advice from their family and friends rather than their doctor or a pharmacist. People may not take their medicines because the ingredients maybe contrary to their beliefs.
  - Language – English may not be a first language or the instructions are unclear
  - Mental – people with memory loss can forget what tablets they've taken or some people may not think they require their prescribed medicines. Compliance devices (monitored dosage systems such as dosette boxes) are being used with increased frequency and cost. There may be novel solutions to address some of the above challenges.

- **Minimising errors and wastage in prescribing and dispensing**
  - Paperless (or paper light) total quality system to minimise errors in prescribing and dispensing with appropriate checks and sign-offs at each stage.
  - Minimising wastage. Mechanisms to ensure that the most suitable form of medicine is used for patients in order to enable adherence. Systems to further understand the reasons for medicines wastage, hence enabling the management and minimisation of medicines wastage by patients. This applies to returned unwanted medicines and those dispensed on repeat prescriptions.
  - Links using appropriate standards to other systems to inform patients and healthcare practitioners.

- **Risk stratification in medicines adherence**
  - It is particularly important to target adherence initiatives towards people at highest risk of not taking their medicines correctly. Currently, it is difficult to identify these people. For example, patients are registered with GP practices but not required to register with a particular community pharmacy and can be admitted to different hospitals.
  - There is a need to identify and target those patients who do not use their medicines effectively and who are frequently readmitted to hospital.
  - There is a need to identify patients most at risk of frequent hospital admission due to medicines non-adherence before these admissions occur and to provide this information to healthcare professionals.
  - There is also need to identify subgroups of patients where non-adherence poses a risk to the community (e.g. tuberculosis).
  - There is a need to understand what side effects are important to patients and therefore individualise drug therapy accordingly.

- **Eliminating risks at system interfaces**
  - People use various health care systems depending on their health condition and the local clinical pathway. This means they move between GP (primary) care, community and community pharmacy care and hospital (acute) care. Handovers and information sharing between these systems is poor and often non-existent. WMAHSN is keen to consider systems which allow the patient and healthcare professional appropriate access to a single accurate record and/or the Summary Care Record. Medicines passports are also of interest in this context.
  - Such systems must meet current technical and functional interoperability standards including those from standards bodies (Dictionary of Medicines and Devices (dm+d), Clinical Documentaton Architecture (CDA), EU Falsified Medicines Directive (FMD), SNOMEDCT etc.), professional pharmacy organisations and the Royal College of Physicians (via Professional Records Standards Body).

Priority – Patient experience and feedback

In order to deliver a patient-focused service, there is a requirement for patients to be involved in the design of these services and for their feedback to be taken into account when reviewing the quality of such services. There is a plethora of organisations which support the voice of the patient, carer or public citizen and the WMAHSN is interested in how programmes of work could be delivered to demonstrate the following:

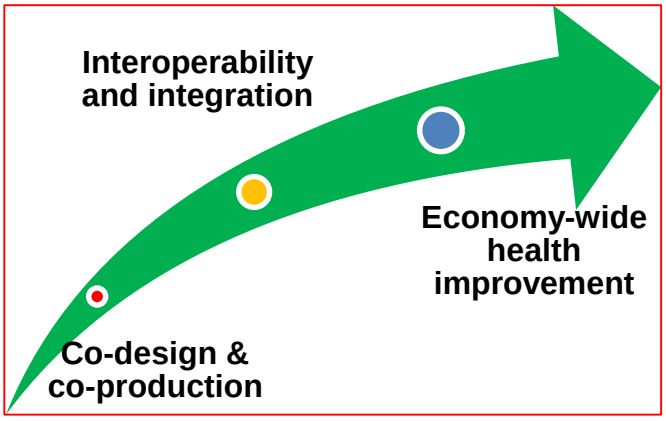
- A range of approaches to engage with seldom heard or hard to reach voices in order to obtain their feedback as to whether their health needs are currently being met.
- Once people have expressed an interest in becoming involved in providing their thoughts on a service, ensuring West Midlands-based organisations have consistency in approach and establish key principles for anybody engaging with service users to abide by – for example, explaining all acronyms, using plain English, setting the context and purpose for people attending, obtaining and providing feedback and demonstrating how people can contribute and what differences their involvement has made.
- Demonstrating where and how patient, public and carer involvement has made a meaningful difference, along with how many have been involved in order to raise the awareness of the value of patient, public and carer involvement in the redesign of services in order to demonstrate truly patient-centred services.
- Development of strategies to engage with patients, carers and the public early enough and on an ongoing basis to make a meaningful difference to the design and development of new services.
- Integration of service models based on the needs of the patient, determined by the patient and involving both health and social service models.
- New models of care are on the horizon with the 100,000 Genomics Project set by the Prime Minister. The sequencing of genomes will radicalise the way that we deliver and receive care and treatment in the future, with implications for patients; their involvement is required now to deliver a more patient-focused service in the future. The impact will be across all specialisms and conditions and will require a multi-condition view on how to manage the impact of this approach. Patient, public and carer representation is required to be involved in the development of the West Midlands Genomics Medicine Centre in order to highlight and be able to address the sensitivities of this approach as soon as possible.
- Innovative, flexible, accessible and inclusive methods to gather patient feedback, at source more effectively that will have the greatest affect for the patient and the service. WMAHSN has undertaken an initial review of current technology to support this process, so we would be keen to hear of any innovative use of relevant digital solutions such as mobile apps, web sites, social networking etc. that can improve the NHS's ability to receive, act upon and respond to user feedback

- Development of the knowledge, training and skill set of those conducting patient, carer and public involvement.

Priority – Digital health

WMAHSN's digital health theme has undertaken a review of priorities for 2015 and beyond. These priorities are driven by a vision for digital health described by the following model:

Note that in this model, innovations may 'push' development from the left to the right, or 'pull' from the right.



Our thematic selection criteria are:

- Clearly defined, measurable outcomes (health/economic)
- Fit with our vision for co-production and interoperability to deliver health improvement
- Fit with the priorities below.

For future programmes of work, the WMAHSN is particularly interested in hearing of innovations in digital health which can deliver region-wide benefits in the following areas:

- Integration of digital assets, including primary, community and secondary healthcare (including mental health) and social care.
- Engaging with international standardisation such as IHE, HL7, SNOMED CT etc.
- Building a universal Personal Health Record (PHR) allowing patients access to their records across care settings. Please note that a PHR is the aggregation of relevant information, including EHRs, EPRs patient-provided data etc.
- Supporting better interpretation of data which translates into better care and health, making digitally available health information accessible and meaningful to a range of stakeholders, including patients and carers as well as health and care professionals.
- Effective integration of care provision and research using digital technologies and data-driven approaches to increase engagement with research and promote the translation of research into practice.
- Promoting shared care through universal online professional access to records.
- Making healthcare electronic transactions available to patients, carers and citizens.
- Future planning of services through feedback from citizens and patients to shape the future digital landscape.
- A fit for purpose workforce in which the effective use of digital tools is an integral aspect of personal and professional development.

Example types of innovation:

- Crowdsourcing information from the public that drives demand for access to online information and services such as a PHR.
- Developing tools which enable the use of SNOMED CT to standardise information across disparate clinical data sources.
- Improving the capability and capacity of health organisations to analyse, interpret and present information in an accessible way to citizens, patients and clinicians.

Priority – Open data

The open definition of open data is “data that can be freely used, reused and redistributed by anyone - subject only, at most, to the requirement to attribute and share alike”. Open data usage, by virtue of its ‘open’ nature has developed, in the public consciousness, a natural association with democratisation, accountability and transparency. These are particularly topical when applied to the expectations we have of our public services. So what are the implications for public healthcare delivery? How can we use open data to enhance it?

It is often thought that public healthcare issues must be centred around the NHS, so it should be both the provider of open data and the target of evaluation and judgement based upon what the data reveals. This may appear sound reasoning, in principle. Yet, it is relatively impractical and arguably narrow in reality. Firstly, NHS bodies are largely reticent to release data sets as they, not without good reason, see substantial risks: ethical, reputational, quality-based and so on. Secondly, even where health open data is present, it may not enable us to generate useful information and intelligence, as data is not always cleansed, aggregated and systematised across sources. Thirdly, healthcare is not delivered in a vacuum and its overall effectiveness relies substantially on numerous contextual factors, of which two particular nuances need to be borne in mind. Individually, each of us is responsible for our own health, not the NHS - the NHS is responsible for delivering healthcare services. As a society, we are rightly recognising that when asking healthcare questions we must consider the role of health and social care, and thus the role played by local authorities in delivering solutions.
For the reasons noted above, the open data and healthcare debate cannot - and should not - be restricted solely to using data to ‘pass or fail’ NHS services. It must include what we do collaboratively as individuals, communities, local authorities and NHS organisations to maximise public health impacts and outcomes.

The most useful, realistic and collaborative stance is to think about finding ways of collating and analysing the open data that is already in the public domain to present information and intelligence needed by the NHS and local authorities to target health-related services efficiently and effectively. This approach sees open data not only as a means to measure healthcare performance. It is also a tool that can help us comprehend important contexts and conditions in which appropriate health and healthcare solutions can be crafted. This is the position from which we wish to launch our open data opportunity for innovations.

Scope

You are encouraged to create something that will: (1) provide evidence to NHS and/or local government departments to help them improve the targeting, development and delivery of their health-related services and/or (2) develop alternative solutions to public health challenges that will reduce the pressures on NHS and public sector health and social care services.

Whether you wish to put forward transformative business models and processes, or software solutions, or data modelling and triangulation toolkits, we are interested in the diverse ways in which you might use open data to generate health improvements and healthcare solutions within the West Midlands region. Please note that you may address a wider geography, but your innovation should have a realistic chance of impacting the area covered by the WMAHSN.

You may use any relevant open data sets available. Sources to consider might include, but not be limited to sets on: health and social care, transport, environment, built infrastructure, education, housing, crime and the national census.

Priorities

We are seeking innovative approaches to address the following:

- **Healthy ageing and preventative health**
  - How can active living and healthy ageing solutions for maintaining wellness and self-management be maximised in a community setting? Ageing starts from the moment we are born and not just in our later years. We are interested in harnessing solutions using open data that help to prevent or decelerate age-related conditions, through early intervention.
  - We are also keen to engage open-data based approaches that help to maintain health and decrease illnesses in older people.

- **Enhancing access to health and wellbeing services for those at risk of economic exclusion among the working-age population**
  - How can NHS organisations and/or health and social care departments better target and deliver services for people who are at risk of long-term unemployment, or are suffering from the detrimental health and wellbeing effects of long-term unemployment?

- **Improving the effectiveness of rehabilitation through improved use of residential and public spaces**
  - Patients recovering from illness - physical and/or mental - are often set self-administering rehabilitation exercises, such as physiotherapy, mindfulness techniques or motivational incentivisation. To complement and increase the lasting effectiveness of these exercises, integration of good health practices into everyday life and the environments in which we live are key. With a wealth of open data available on residential and public space, how can these data sets be used to enhance the contexts in which individuals get better?

- **Increasing access to support for people at risk of developing mental health conditions**
  - One in four people in the UK experience mental health problems during the course of a typical year (source: Mind). The most common problems are linked to anxiety and depression. We are interested in supporting innovations that employ open data to provide intelligence on factors leading to the development of anxiety and depression to enable NHS organisations, health and social care departments and partners to design and deliver early-intervention strategies.

- **Maximising health and social care system efficiency and integrated care**
  - Open data has the potential to maximise health and social care system efficiency and improve the integration of care. We would encourage the submission of innovative approaches that use open data to increase system efficiency and integration, potentially as a joint programme with the AHSN integrated care enabling theme.

Priority – Mental health

The Mental Health Advisory Group (MHAG) has undertaken a stakeholder workshop and a series of discussions to establish a clear set of priorities for 2015 and beyond.

For future programmes of work, the WMAHSN is particularly interested in hearing of innovations in mental health which can deliver region-wide benefits in the following areas:

Enabling technology

Examples include:

- Appointment and support of Chief Clinical Information Officers to champion use of technology in mainstream services to improve care and efficiency.
- Undertake evaluation and research to prove the benefits of technology enabled services and remove barriers to widespread adoption.
- Actively engage users, carers and care professionals, to identify opportunities to transform services using technology.
- Share information and knowledge between organisations, care professionals and users/carers.
- Agree new technology for implementation and bid for required funding.

Integrating care

- Involving users/carers as a vehicle for continuity of care along pathways and across organisational and professional boundaries.
- Evaluate existing integrated models of care based close to users (e.g. at GP surgery).
- Develop integrated care pathways from a mental health perspective.
- Education and training of care professionals to promote understanding, raise awareness and reduce stigma associated with mental health.
- Establish innovative partnerships to bridge the gap between existing service providers (e.g. local gyms, schools).

Prevention and wellbeing

- Design of services which promote physical health and wellbeing of mental health service users.
- Develop and/or evaluate technology that supports wellness to reinforce the prevention agenda.
- Redesign services which focus resources on the promotion of mental wellbeing and the prevention of illness.

Co-production and co-design

- Educate users and carers to be more empowered and productive participants in the design and delivery of care, not just passive recipients.
- Implement and evaluate the use of technology (e.g. mobile devices and social media) to support co-production.

Priority – Long term conditions

80% of healthcare spend in the UK is on caring for people with long term conditions (LTCs). Most patients LTCs (respiratory and cardiovascular diseases, diabetes, anxiety and depression, musculoskeletal pain and associated disabilities, dementia) suffer from two or more conditions; some have associated adverse lifestyle habits such as obesity or smoking. The lack of holistic care, or clashes between different sets of clinical assessment and management protocols may have an adverse impact on patient care and health outcomes.

Improvements in the management of those with LTCs, including better support for sustained self-management and shared care and co-ordinated clinical management, is a key priority for health and social care providers and commissioners. The WMAHSN has recognised the importance of these issues by designating LTCs as one of its clinical priorities (led by Dr Ruth Chambers of Stoke-on-Trent CCG). Due to the close alignment between LTCs and the integrated care (IC) theme, the WMAHSN has established a joint IC/LTC Advisory Group, which is chaired by Rhian Hughes of Keele University. To date, the WMAHSN has supported the spread of five educational/development LTC programmes.

For future programmes of work, the WMAHSN is particularly interested in the following priorities to improve the care of/service efficiency for those with LTCs across the West Midlands region:

- **LTC prevention and management**
  - The management of patients with LTCs, particularly those with multiple LTCs, is a significant challenge to health and social care systems. Improving the clinical management of LTCs, improving patients' understanding and self-management of their conditions and prevention of deterioration of LTCs are key priorities for the WMAHSN.
  - Programmes for this priority will work to spread evidence-based approaches to prevent deterioration of LTCs and improve LTC self-management, the clinical management of multi/co-morbidities, shared care provision and/or co-ordinated clinical management. Potentially, programmes could assess patient experience of services relating to the management of LTCs and link in to the training priority below. Programmes will support the collection of evidence to support further rollout.

- **Patient, carer and staff training**
  - LTC management is improved by patients, carers and staff receiving appropriate, best-practice training which they adopt as changes in patient or professional behaviour.
  - This priority is looking for programmes of work related to workforce development, education and other activities to address patient, carer and staff needs to increase the adoption of improved compliance (patients) and practice (professionals) across our region. Due to the close working relationship between the WMAHSN and Health Education West Midlands, programmes could potentially be undertaken in partnership between the organisations. Programmes could also include an element of data analysis and quality improvement.

- **Digital and telehealth/care**
  - Digital and telehealth/care technologies can support patients, carers and staff to underpin the management of LTCs and help to prevent avoidable deterioration of LTCs or enhance patient confidence and competence to manage their conditions. Technologies can support the evaluation of approaches to improve LTC management.
  - This priority is looking for digital tools and approaches to support the clinical and social care management of LTCs and/or the evaluation of programmes of work, such as the application of best practice in the management of LTCs. Consideration should be given to the practical application of solutions and their integration into existing healthcare systems within the timeframe of programmes.

Given overlaps, those responding to LTC challenges should consider the WMAHSN's IC challenges.

Priority – Integrated care

For the NHS, the lack of Integrated Care (IC) working can result in communication gaps between clinicians in different settings, recurrent primary care consultations, excessive poly-pharmacy, medication clashes for various co-morbidities, unexpected, preventable and often recurrent hospital admissions and over-long hospital stays, resulting in an avoidable burden on health systems and increased costs and unduly high morbidity and mortality rates.

Improved integration of health services provided by different organisations (including local authorities and the third sector) is a key priority for health and social care providers and commissioners. The WMAHSN has recognised the importance of IC by establishing an enabling theme. Due to the close alignment between IC and long term conditions (LTCs), the WMAHSN has established a joint IC/LTC Advisory Group, which is chaired by Rhian Hughes of Keele University.

To date, the WMAHSN has supported the spread of two large, evidence-based IC innovative approaches across the West Midlands region:

- Flo mobile phone texting telehealth: provides a technology-based example of patient-centric supported shared management for asthma, COPD, hypertension and diabetes. This programme is being disseminated across primary, acute, community nursing, mental health and social care settings.
- STarTBack provides an example of stratified care for back pain (the biggest cause of disability worldwide), which delivers integration of care between GPs and physiotherapists along the primary and secondary care pathway, ensures back pain patients are assessed according to risk and then targeted to receive the right treatment, at the right time, in the right place.

For future programmes of work, the WMAHSN is particularly interested in the following priorities to support the development of integrated care across the region:

- **Integrated care**
  - Increasing the integration of services across different health and social care sectors/settings, whether between primary and secondary care and/or mental health or social care and/or voluntary sector, with evidence to support further implementation of approaches that capture how to overcome the challenges effectively.
  - Programmes for this priority will work to spread evidence-based approaches across sectors, to improve the effectiveness and quality of delivery of patient care and maximise service efficiency. Potentially, programmes could link in to the cultural and staff development priority below. Programmes will support the collection of evidence to support the further rollout of similar or revised programmes.

- **Cultural and staff development**
  - Organisational culture and leadership has a significant impact on the successful rollout of integrated care initiatives. Team working within and across organisations is also of critical importance.
  - This priority is looking for programmes of work related to workforce development and education, networking and other activities to address cultural development, leadership and team working. Due to the close working relationship between the WMAHSN and Health Education West Midlands, programmes could potentially be undertaken in partnership between the organisations.

- **Digital and telehealth/care**
  - Digital and telehealth/care technologies support delivery of care and services from perspectives of patients, carers and staff, enhance integration between organisations, support integrated care records and can be used to develop the evidence support the evaluation of integrated care approaches.
  - This priority is looking for digital tools and approaches to support the accelerated integration of services and health records, improve the quality of patient care and carer and staff support, ensure patient safety and effectiveness of delivery of care and enhance the evaluation of programmes of work. Consideration should be given to the practical application of solutions and their integration into existing healthcare systems within the timeframe of programmes, and rollout across the region.

Priority – Wellness and healthy ageing

The WMAHSN has a system priority of wellness and disease prevention with a focus on discovering innovations and initiatives that empower people to develop or change to a healthier lifestyle with positive behaviours with a view to preventing primary illness. Over the past half a century life expectancy at birth has increased by approximately 10 years for both men and women across Europe. This has been largely due to the major improvements in nutrition, hygiene, medication, quality of housing and working conditions. However, society faces new health challenges as unhealthy lifestyles, reduced physical activity and rising obesity, increased use of recreational drugs

and excessive alcohol and tobacco consumption, all contribute to more people living with long term conditions such as diabetes, cardiovascular and Alzheimer's diseases and some forms of cancer.

Despite the evidence that changes in lifestyles have a positive impact on health, many efforts to change lifestyles have failed and the overall disease burden, particularly in older age, remains high. However, research has shown that early lifestyle interventions tailored to the individual have the potential to reverse the progress of diseases, which in turn can bring about a major delay in the onset of frailty and disability in the older population. In addition, there is a case for communicating more effectively with young people to help them avoid making unhealthy lifestyle choices in the first place.

The WMAHSN wishes to consider programmes of work that address the following challenges:

- Develop and implement personalised health coaching, services and devices for the prevention of metabolic deterioration, frailty and disability using new approaches.
- Implement new conceptions and standards for analysing, interpreting and qualifying (diagnostic) data to support accurate early risk assessment and the development of personalised health care, precision medicines and the use of genome sequencing.
- Provided trusted data sources, advanced data analytics and user-centred interfaces as building blocks for intelligent modules to prevent people getting ill.
- Employ online solutions and social networks to enable citizens, especially from disadvantaged or hard to reach groups, to take responsibility for their own health and to contribute to improving it.
- Developing strategies to ensure that solutions are not dependent on social inclusion factors such as language, literacy, faith, sensory abilities or physical mobility.
- Target health literacy and education through interactive massively open online courses (MOOCs) to allow citizens to improve their health literacy and support them in turning the knowledge they gain into a healthier lifestyle.
- Develop products and citizen-orientated strategies to encourage positive lifestyle changes, including better nutrition, reduced tobacco and alcohol consumption, greater physical activity, stress management and wide leisure and social networks in order to build individuals' resilience levels.
- Create and test new smart products to support daily activities in the home, encourage greater communities, monitor health status, provided coping mechanisms and improve quality of life.
- Develop and deploy novel education methodologies and business models to increase health awareness and improve nutrition, promote physical activity and adjust the work-life balance.
- Establish innovative personalised health and lifestyle programmes to shift the emphasis away from a disease-driven care system to a health-focused one.

Priority – Education and workforce for the future

The education and training enabling theme underpins the WMAHSN clinical priorities: mental health, long term conditions and drug safety and medicines optimisation, as well as underpinning the other enabling themes: digital health, clinical trials, integrated care, innovation and adoption and industry and wealth creation.

WMAHSN is now inviting a call for education and workforce for the future innovations that will support and develop our clinical priorities and enabling themes to accelerate the adoption of innovation to generate continuous improvement in the region's health and wealth.

WMAHSN welcomes innovations that support our clinical priorities and or enabling themes and is particularly interested in hearing of innovations in education and training which can deliver region-wide benefits in the following areas:

- **Patient self-management**
  - Education and training that supports a sustainable model whereby patients have the knowledge, empowerment and confidence to manage their own long term conditions with the overall objective to improve patient outcomes and patient experience.

- **Health and wellbeing education for citizens, patients and carers**
  - Education and/or training that supports citizens, patients and carers to become more empowered and in control of their health and wellbeing and ultimately improve regional health and wellbeing.

- **Translation of research into practice**
  - The gap between research findings and clinical practice is well documented and a range of interventions have been developed to increase the implementation of research into clinical practice. WMAHSN is inviting innovations whereby education and training can transform the speed and equity of adoption of research into practice across the West Midlands.

- **Multi-professional and/or inter-professional learning**
  - Innovative multi-professional and/or inter-professional education and training solutions that will deliver measurable improvements in outcomes for patients across the West Midlands.

- **Flexible future workforce**
  - New models of care are emerging which require the workforce of the future to be more flexible and receptive to changing market requirements e.g. digital solutions. WMAHSN are inviting innovations whereby education and training solutions can be adopted to ensure a flexible future workforce.

- **Education and training of non-professionals to improve patient experience**
  - Non-professional staff e.g. porters, receptionists, catering staff, healthcare assistants and domestic services all have an extremely important role in the delivery of safe and effective healthcare services and each member of staff has a significant impact, whether directly or indirectly, on patient experience. WMAHSN are now inviting innovations whereby education and training can improve patient experience across the patient journey for all the roles that impact upon the patient pathway.

- **Education to develop the awareness and skill sets required at school/further education level to progress into life sciences and/or health informatics careers**
  - A number of careers exist within the NHS that many school leavers and graduates are unaware of. As new models of treatments and care evolve e.g. 100,000 Genomes Project and beyond, greater numbers of employees with flexible skill sets will be required to deliver these new challenges. It has been recognised that young people may be unaware of these future opportunities and will be steered towards the traditional roles within the NHS e.g. doctor, nurse, physiotherapist etc. WMAHSN are now inviting innovations whereby schools and colleges of further education raise the awareness of these career pathways and equip young people with the skills to pursue a career within the life sciences and health informatics sectors.

Priority – Wealth creation

The WMAHSN has an enabling theme of industry and wealth creation in order to create wealth by delivering improvements in healthcare across each of the WMAHSN programmes through industry collaboration and attracting inward investment.

For future programmes of work the WMAHSN is particularly interested in three core areas to support the seven-point growth plan and these are as follows:

- **Investing in a West Midlands health economy built on excellence**

AHSNs facilitate collaboration between academia, the healthcare and third sectors and industry to make UK healthcare a more attractive place to do research and business, thus supporting the growth of the life sciences sector in the UK and enabling the discovery of new innovations.

This priority requires programmes of work that are able to exemplify and promote what is possible through sustainable health partnerships and centres of academic and clinical excellence, as well as looking at the regional life sciences sector and attracting inward investment from global investors. A particular area of interest is whether regional data and informatics capacity could drive investment.

- **Delivering the productivity dividend**
  AHSNs are working with their members and local communities to improve the health of their local populations, thus making them more active in the economy and improving the productivity of the UK workforce at large.

  We would like to see programmes of work that are able to explore or demonstrate how innovation in technology and adoption of best practice drives increased productivity in the West Midlands healthcare, as well as technological and service-based improvements which can drive up productivity in the regional population and the metrics for evidencing this increased productivity.

- **Healthcare's role as the intelligent lead customer**
  It is clear that in order to bring tomorrow's innovation to market and find today's best practice, we need to support programmes of work that develop the expertise of the healthcare sector to help make them a better customer for any supplier, through supporting them to articulate their needs and procure innovative solutions more effectively.

  In parallel, it is important to work with NHS suppliers (industry) to help them better understand NHS requirements and how to access the healthcare market, moving away from a purely transactional way of working to a partnership model.

  The desired outcome for these programmes is to create a healthcare sector that is an intelligent customer who can be market making in their approach to solving its challenges leading to commercial opportunities both here and abroad. It is also essential to consider opportunities to drive down both cost to serve and cost to procure while doing so.

In addressing these three core areas, we will cover the seven point growth plan which has set out ambitions to achieve the following over the next 4+ years:

- The AHSN will at all times promote the West Midlands as the place to invest and deliver life science and healthcare innovation.
- The WMAHSN is committed to build on its existing strengths and partnerships between universities, the wider research base, industry and the NHS to establish a cohesive system of translational research and development.
- The WMAHSN will be proactive in attracting, developing and rewarding the best talent in life sciences and healthcare.
- The WMAHSN will work with the entire life science and healthcare innovation ecosystem to produce a regional population that is more productive and more economically active.
- The WMAHSN is committed to working with both the NHS and local authorities in the adoption of innovation and best practice to improve their productivity, in turn empowering them to deliver more health benefit for a public resource.
- The WMAHSN will endeavour to support the export of innovation, ideas and experience globally and will also work with UK industry in providing new global market opportunities.
- The WMAHSN will facilitate the development of a more economically effective health system, with the WMASH supporting 'lead customer' activity with its memberships.

Priority – Evidence and adoption

West Midlands-based NHS organisations, universities and industry conduct clinical research of global significance. The WMAHSN has recognised this by establishing a clinical trials (CT) enabling theme and is building on regional successes to date to foster an innovative, region-wide culture of optimum engagement in clinical trials at all stages of the translation path from research to practice. Collaboration between the WMAHSN and the National Institute for Health Research (NIHR), as well as other infrastructure/expertise, will provide the opportunity to accelerate the conduct of research and adoption of study findings aligned with the healthcare priorities of the West Midlands. An AHSN CT Advisory Group has been established, and is chaired by the Interim CT Theme Director, Dr Jeremy Kirk of the West Midlands Local Clinical Research Network (CRN) and Birmingham Children's Hospital.

To date, the WMAHSN has supported the development of Query Workbench, a digital tool to facilitate patient identification for primary and community care research (CT theme in partnership with the digital health theme).

For future programmes of work, the WMAHSN is particularly interested in the following four priorities to support the development of regional clinical research:

Cultural and capacity development

- Lack of capacity (often in terms of skilled workforce) and organisational cultures that do not embrace research limit the number of clinical studies that are undertaken across the West Midlands region. For example, the conduct of studies in smaller trusts with conflicting demands of resources can be challenging.
- This priority is looking for programmes of work related to education and training, workforce development, networking and other activities to address capacity and cultural limitations. Due to the close working relationship between the WMAHSN and Health Education West Midlands, programmes could potentially be undertaken in partnership between the organisations.

Industry engagement and growth

- Industry engagement is a key priority for the WMAHSN, with the region wanting to become the region of choice for industry research. The AHSN's seven point growth plan (www.wmahsn.org/growth-plan-launch/) aims to promote the region as the place to conduct life sciences and healthcare research, and enhance collaboration across the region/sectors. Particular challenges can exist when working with small and medium sized enterprises (SMEs) conducting research.
- This priority is looking for programmes of work related to clinical research to support industry (of all sizes) and the AHSN's seven point growth plan, in terms of enhanced collaboration, regional promotion and other activities.

Digital

- Digital technologies are changing the nature of research, with real-world studies being undertaken and big data promising to revolutionise the field.
- This priority is looking for digital tools and approaches to support the accelerated delivery of health and social care research/evidence gathering via existing clinical approaches and new paradigms (e.g. real-world). Consideration should be given to the practical application of solutions and their integration into existing healthcare systems within the timeframe of programmes.

Cross-sector research

- Research across different sectors/settings, whether primary care to secondary care or social care and voluntary sectors is challenging. The WMAHSN would like to improve research across sectors.
- Programmes for this priority should work to improve cross sector working, potentially clarifying regional resources for research or linking in to the cultural and capacity development priority above.

Priority – Patient safety

Building on the recommendations from the Francis Report, the WMAHSN is, in partnership with NHS England and NHS Improving Quality, developing one of the 15 planned Patient Safety Collaboratives (PSCs).

Our aim is to support the development of a strong safety culture that continually reduces avoidable harm by helping organisations to work together to develop, implement, share and catalyse the adoption of proven safety interventions that are based on rigorous, evidence-based scientific methodologies.

The PSC will bring together collaborative networks composed of frontline teams, commissioners, patients and others across settings and organisations to develop the patient safety culture, spread innovative approaches and share learning. This approach will complement other initiative and will dovetail with and augment programmes commissioned under our drug safety and medicines optimisation clinical priority, and our innovation and adoption enabling theme which looks at the spread and adoption of existing good practice across the region.

We will focus on locally determined priorities across our region, ensuring involvement and commitment of staff. To date, we have conducted a survey across the West Midlands to obtain the views of colleagues in the NHS and social care. We also held a symposium on 5 November 2014 to identify, discuss and refine regional priorities.

Initially, a collaborative network and related programme of work focusing on pressure ulcers (linking in hydration, nutrition and possibly acute kidney injury avoidance) will be taken forward. This will involve work across the health and social care sector (bridging community and acute settings) and require leadership, measurement, culture change and patient involvement (all priorities identified by the survey and symposium). This work programme will subsequently inform the development of other safety programmes with similar challenges e.g. safety for children, young people and mental health.

The PSC programme will also work alongside the national 'Sign up to Safety' initiative, with regional providers encouraged and supported to participate.

For future programmes of work when established, the WM PSC is particularly interested in the following five priorities to support improvements in patient safety:

Cultural development

- Organisational culture has a significant impact on patient safety. Leadership and team working within and across organisations are of critical importance.
- This priority is looking for programmes of work related to education and training, workforce development, networking and other activities to address cultural development, leadership and team working. Due to the close working relationship between the WMAHSN and Health Education West Midlands, programmes could potentially be undertaken in partnership between the organisations.

Transition

- Transition between different health and social care providers can cause significant safety issues at handover points, which the PSC would like to address.
- Programmes to address this priority should work to improve handover of patients to ensure that their safety is maximised. Consideration should be given to linking programmes to the cultural development priority above.

Vulnerable populations

- The safety of children, young people and those with mental health issues was highlighted as an area of potential future focus for the WM PSC.
- This priority is looking for evidence-based approaches to improve the safety of vulnerable populations across the West Midlands. Programmes could be potentially linked to the transition priority above.

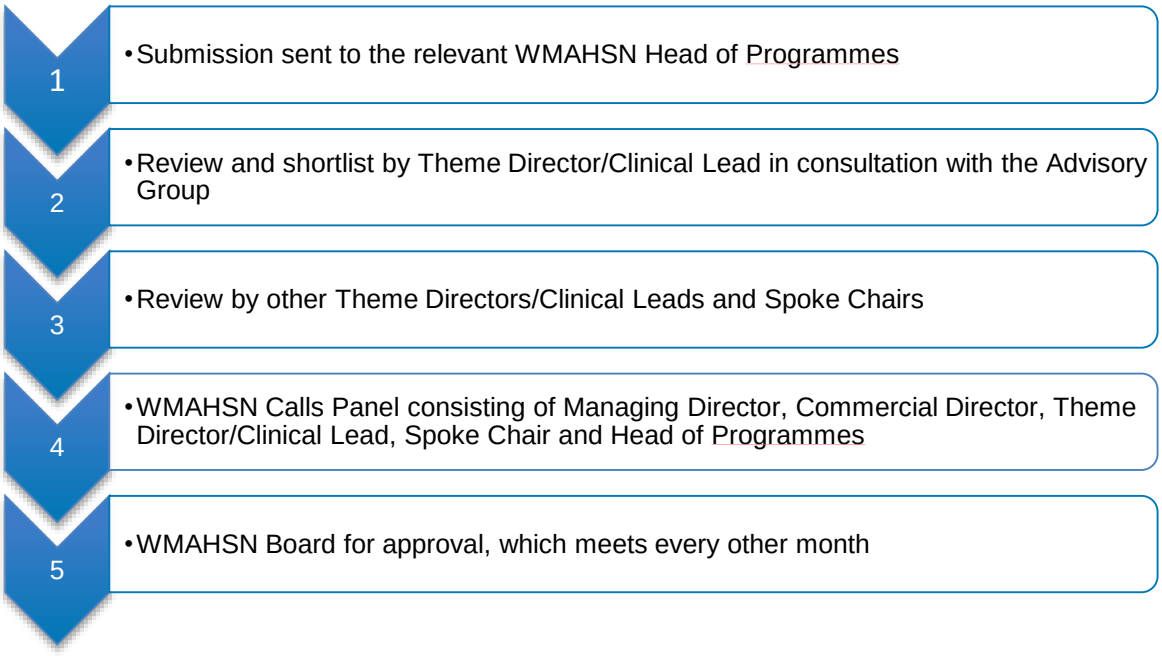
Digital tools

- Digital technologies support patient safety in a variety of ways. Monitoring, integration, analysis and reporting of different information is a significant challenge.
- This priority is looking for digital tools and approaches to support improvements in patient safety. Consideration should be given to the practical application of solutions and their integration into existing healthcare data systems within the timeframe of programmes.

Patient/carer/staff involvement and experience

- Patients and carers have very different experiences of healthcare. Data gathered on their experiences and the experiences of staff can help to identify patient safety issues within organisations.
- This priority is looking for programmes that will utilise patient, carer or staff experience data or involvement activities to identify patient safety issues. Programmes should highlight how identified issues are resolved within organisations.

Process



For any queries on the process please contact the relevant contact for assistance. A template for any submissions can be obtained from our website at www.wmahsn.org/get-involved/Opportunities or by emailing for a copy.

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Integrated care Long term conditions Evidence and adoption Wellness and healthy ageing	Lucy Chatwin and Neil Mortimer	lucy.chatwin@wmahsn.org neil.mortimer@wmahsn.org
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