In July 2017, Christopher Fearne was elected as the Deputy Leader for Parliamentary Affairs of the Labour Party, and became the Deputy Prime Minister of Malta. In April 2016 he had been appointed Minister for Health after holding the position of Parliamentary Secretary for Health since April 2014. Prior to this, he worked as a Consultant Paediatric Surgeon and Clinical Chairman at Mater Dei Hospital. He is a Member of Parliament for the ruling Labour Party and was the Chairman of the Foreign and European Affairs Committee of the Maltese House of Representatives. He received his formal education at St. Aloysius College and the University of Malta, graduating in Medicine and Surgery in 1987, and became a Fellow of The Royal College of Surgeons of Edinburgh.

Malta endorses the use of evidence and electronic health information for policy-making. The establishment of the Small Countries Health Information Network (SCHIN) under the leadership of Malta is a shining example in this area. Unfortunately, the use of evidence and sound data are increasingly in need of defence: data and evidence seem to have dwindling significance in societies in this time of “alternative facts” and alarmingly low measles vaccination rates, even in developed countries and well-educated societies. What are the policy measures and health information strategies used by Malta in this context?

Malta has had a health information set-up since the early 80s. It started off as a hospital information system attached to the main hospital at the time, but gradually expanded its remit to a national level clearing house for a variety of health information and a statistical authority in its own right. Nonetheless, I do not consider that as being enough. Health information is to be generated and used at all levels of management. For this purpose, I have pushed for substantial investment in electronic systems that facilitate the collection of good quality data, which not only enhance quality of care and patient empowerment, but also generate priceless information for managing various parts of the health system and guide investment and political direction.

Through SCHIN, European Member States with populations of less than a million exchange experiences and discuss common health information challenges. What do you see as
the primary challenges for small countries and what is the value for Malta of being a member of SCHIN in addressing these challenges?

This question seems to imply that, being a small country of less than a million people, presents only challenges, but the reality is that it also presents a number of opportunities.

If we have to focus on challenges, there are obviously several challenges which all sectors, not just health, not just health information, are likely to face, such as the lack of resources and personnel, this possibly also translating to a lack of highly specialized skills, as the few personnel available in a small State are likely to have to cover a wide breadth of areas and have difficulty in coping with the extensive burden of reporting, which actually varies very little between a small and a large State. Benchmarking anything can become a challenge too, when there is only, for example, one main acute hospital in a country. Small States always seek partnerships with institutions abroad, or rely heavily on indicator frameworks maintained by international organizations such as WHO in order to be able to carry out such benchmarking.

Specific to health information, one could add the issue of limited statistical power to evaluate some specific relationships in one’s data. Another challenge would be the running of surveys, which, in small countries would have to involve a much higher proportion of the population in order to achieve a meaningful sample. The suggested European Health Interview Survey sample size for Malta is around 4000 completed responses, (1% of the adult population of Malta) whilst for the whole of Germany, it is just over 10 000 (0.01% of the adult population of Germany). Another statistical challenge that researchers from larger countries sometimes fail to appreciate is the problem of erratic time trends.

On this last matter, I must thank the WHO Regional Office for Europe for mainstreaming the small States agenda. I am informed that, since SCHIN was set up and started its work, researchers from larger countries are now much more receptive to the concept of moving averages for small countries, and WHO staff have become much more sensitive to the survey burden experienced by small countries.

On the other hand, being small typically implies a centralized health system, therefore presenting endless opportunities to link such national level data at individual level, obviously always safeguarding personal data. Such a pool of data becomes a gold mine that can generate infinitely rich and very specific health information and intelligence. A small country like Malta can also be more adaptable to changes. Small countries can be centres of innovation; they are perfect laboratories, ideal for piloting, not only new health information initiatives, but also other health-policy actions that necessitate surveillance before, during and after implementation. It is also definitely much easier to rapidly get stakeholders around a table to discuss logistics and the practicalities of how to implement innovative solutions. As discussed earlier, our technical staff are few and they typically have to cover a number of areas each, rather than specialize in one, like their counterparts in larger countries. This is definitely a challenge but also an opportunity. It enriches them greatly as they have to keep up to date with a number of areas at the same time, permitting the pollination of ideas across sectors, facilitating the resilience small States are renowned for.

So I hope I managed to convince you that being a small country does not only present challenges but presents advantages too. For this reason, I have always felt that a number of existing ratings of health systems do not do justice to this special reality that defines small countries, as they are typically designed to perform well in larger countries. I have indeed encouraged SCHIN to work on developing a small indicator set that focuses more on the specificities of small countries, which can help small countries to benchmark against each other. I understand this work is currently under way.

Health information systems are evolving into “information systems for health”. They are interfacing with an increasing number of digital and mobile health applications, including patient records. What is the current situation in your country and what are likely to be the key developments in digital and mobile health in Malta?

Indeed, with the growing need for health to define itself in other policy arenas, such as economic or social policy, the demand for supporting evidence and information in the health sector necessitates health information producers to be innovative and seek data from outside their comfort zone, beyond epidemiological registers or dedicated surveys, to generate the intelligence required for the job at hand.

As discussed earlier, as a small State we treasure the opportunities that our centralized administrative systems provide and, during my tenure, we have invested in a major reform of the local e-health landscape to take our patient record systems into the 21st century with a unifying infrastructure that makes use of novel technologies to be able to make better use of big data approaches. I am very much aware of the value of such information systems, not only for our own
policy-making, but also for wider global applications as well. As IT is becoming an extension of our very own existence, it is obvious that this applies also to health – with an explosion of digital and mobile health applications all around us, all of which are generating data that can multiply even further the value that can be generated from our information systems.

My government has always envisioned Malta as a bold innovation hub and this has indeed materialized in a variety of sectors. Health is no exception. As discussed earlier, as a small State, Malta presents a number of opportunities in the health sector, not only for novel big data approaches, but also for innovative applications of health information in other sectors, including the procurement of medicines, for example.

Complex modelling and the use of various algorithms have not only become the backbone of computing in the 21st century but are also something that the general public has become aware of through such things as “artificial intelligence”, “machine learning”, or “augmented reality”. As scientific professions, public health and medical research are both driving and driven by these new technologies. Which innovations might have the most significant public health impacts in small countries?

In a small State with limited specialized human resources, what can be achieved is somewhat limited to the number of hands on deck, even if financial resources were infinite. These technologies would present immense opportunities to overcome such limitations, not only to support decision-making, but also to reach out and deliver personalized health according to individual needs at population level. To do so, and do it effectively, these technologies would have to use our existing data and information in their decision-making algorithms.

During our Presidency of the EU Council, we have also worked tirelessly to develop the use of European Reference Networks within the European Union, being ourselves living proof of how such arrangements with larger centres can provide highly specialized treatment for rare disorders. We started off the Valletta Technical Committee, which seeks collaboration on access to innovative medicines; a Committee that is still very active. We chose to focus on cross-country collaboration on the health workforce. As small countries, we typically seek collaboration with other countries for the further specialization of our health workforce as the demand for more specialized health-care services grows. This collaboration may not only be limited to the training itself but also include assisting health-care professionals to keep an accredited skill up to scratch in a country where only a few cases per year occur. Being an island can limit the mobility of very morbid patients, necessitating the local provision of highly specialized care, even if the number of cases per year may be low. Such technologies can only facilitate such collaborations, especially in the case of highly specialized health professionals and the provision of highly specialized care.

That said, the fear that these terms may instil in the general public must be acknowledged – that their unbridled growth may threaten the very existence of humankind. While such a potential threat does exist, supporting calls for governance in this sector, if we look back over the past century in particular, a number of technologies and research developments have indeed improved population health and well-being – vaccines, medicines, surgical technology, even telecommunications. Public health needs to remain abreast of these technologies – harnessing them for the improvement of population well-being and mitigating any health risks that new technologies may be exposing the population to.

Disclaimer: The interviewee alone is responsible for the views expressed in this publication and they do not necessarily represent the decisions or policies of the World Health Organization.