

### K4 – Delivery of Health Services: Systems for Health: The Emerging Sciences



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The two critical challenges in improving the health of populations are the ability to understand: i) the multiple and complex factors of the determinants of health, and ii) the nature of health systems as complex adaptive systems. Interventions to improve population health are implemented in complex human ecosystems which are dynamic and adaptive and influenced by individuals, the communities they reside in, social processes and the wider social, political and economic environment. In a review, Balas & Boren concluded that it may take 17 years for 14 percent of original research to turn into clinical applications and even longer to have an effect on population health.

Systems thinking is enabling us to better understand the inter-relations and inter-actions of the different components of health systems. System science has been increasingly applied in health systems research using mixed methodologies from different academic disciplines, fostering the development of new sciences.