

<b>Appendix C. Summary of all research questions with their Research Priority Scores, by health area and question type</b>								
	<b>Clarity score</b>	<b>Answerability score</b>	<b>Impact score</b>	<b>Implementation score</b>	<b>Equity score</b>	<b>Total score (Research Priority Score)</b>	<b>Average Expert Agreement</b>	
<b>Health area</b>								
<b>Communicable diseases prevention and management</b>								
<i>Descriptive epidemiology</i>								
1	What are treatment adherence rates, and what are the risk factors for non-adherence or default, among adolescents on long-term treatment for TB?	100	94	97	94	97	96	93
2	What is the incidence and burden of TB among younger (10-14y) and older (15-19y) adolescents in the world, by sex particularly among adolescents with HIV, and what proportion of the adolescents have drug resistant TB?	91	100	91	85	91	92	87
3	What are the true rates (based on empirical data not models) of mortality and DALYs lost from diarrhoeal disease and from lower respiratory tract infections in adolescents (10-14y and 15-19y) by sex, SES, rural/urban, by HIC/UMIC/LMIC/LIC, and by world region?	91	94	90	88	94	91	85
4	What are the rates of development of anti-tuberculosis drug resistance in adolescents?	82	100	91	91	81	91	82
5	What are the prevalences of the various communicable diseases amongst primary and secondary school students?	71	94	88	79	85	87	73
6	What are the long-term effects of TB disease and treatment - particularly MDR-TB, which requires 18-24 months of potentially toxic therapy - on an adolescent's social and academic development?	85	97	85	91	76	87	78
7	What are the risks and co-morbidities associated with TB in adolescents?	88	91	88	85	82	87	75
8	What are the prevalence and risk factors for pneumonia mortality in adolescents, and what is the relationship between comorbid risk factors and mortality?	76	82	88	78	75	82	69
9	How do risk behaviours for communicable diseases compare between regular users of the internet, media and telecommunications (stratified into sites visited, types of messages) and those not using these media?	62	71	65	65	62	65	49
	<i>Communicable diseases descriptive epidemiology (mean)</i>	<b>83</b>	<b>92</b>	<b>87</b>	<b>84</b>	<b>83</b>	<b>87</b>	<b>77</b>
<i>Intervention: Discovery</i>								
1	When controlled for other socioeconomic factors, is TB disease during adolescence associated with lower earning potential, and/or higher prevalence or severity of depression, and/or higher prevalence of substance use?	85	91	81	72	84	82	70
2	Why does TB change from being a relatively benign disease in 3-10 year-olds to a relatively severe disease, which is also much more transmissible, during adolescence? Is this due to hormonal immunoregulation? Are there biomarkers that correlate with this phenomenon?	88	88	79	88	68	81	73
3	What immunological and other biological factors contribute to the increased risk of TB disease observed among adolescents?	88	88	81	72	78	80	68
4	How best to follow up the treatment of tuberculosis among adolescents?	62	84	78	69	72	76	56
5	What clinical and biochemical markers are associated with prognosis in adolescents on treatment for TB/HIV?	94	88	81	66	63	76	70
6	What TB point-of-care diagnostic test would best suit the needs of adolescents?	71	76	78	72	72	75	69
7	What biomarkers can be used to evaluate the adherence to TB treatment among adolescents?	85	85	82	65	56	74	64
8	How can new technologies - mainly social media and GPS-type systems - be used to determine patterns of transmission of specific infectious diseases among adolescents in various environments?	85	76	75	69	72	73	63
9	How best to measure the knowledge and practices of adolescents related to the prevention of communicable diseases?	56	65	68	68	59	65	46
10	How best to evaluate a primary prevention policy in reducing the burden of rheumatic fever and rheumatic heart disease in endemic countries?	59	63	69	63	59	64	49
	<i>Communicable diseases intervention: discovery (mean)</i>	<b>77</b>	<b>81</b>	<b>77</b>	<b>70</b>	<b>68</b>	<b>75</b>	<b>63</b>
<i>Intervention: Development / Testing</i>								
1	What is the best way to help adolescents to adhere to TB medication when they are also taking ARVs?	88	88	94	94	90	92	84
2	Can overall duration of TB treatment and/ or frequency of TB medication dosing be reduced to facilitate adherence and improve rates of treatment completion among adolescents?	94	83	100	90	80	90	84
3	Is TB screening at school registration in adolescents cost-effective?	88	88	90	90	83	88	82
4	What are the long-term effects of TB disease and treatment - particularly MDR-TB, which requires 18-24 months of potentially toxic therapy - on an adolescent's social and academic development?	88	91	80	80	83	83	72
5	Can adolescents with tuberculosis infection in tuberculosis high burden countries be identified and successfully treated to prevent development of contagious disease in the near or distant future?	75	78	87	77	83	82	64
6	What are the relative validity, cost and usability of geneXpert, urine test and interferon-gamma release assay (IGRA), or tuberculin skin test (TST) for the diagnosis of TB in adolescents?	81	77	77	80	63	75	70

7	Can self-testing reduce transmission of TB among young people?	53	67	73	67	67	<b>69</b>	<b>53</b>
	<b>Communicable diseases intervention: development/testing (mean)</b>	<b>81</b>	<b>81</b>	<b>86</b>	<b>82</b>	<b>79</b>	<b>83</b>	<b>73</b>
	<b>Intervention: Implementation / Delivery</b>							
1	What are the key barriers faced by adolescents to access TB and TB/HIV diagnostic and treatment services in high and low income countries, and how can these be overcome?	100	97	100	90	97	<b>97</b>	<b>95</b>
2	Which programmatic interventions developed to improve adolescent retention in care and treatment adherence for other communicable diseases (i.e. HIV) would be useful for application in TB programs?	88	93	93	90	93	<b>93</b>	<b>84</b>
3	What is the potential contribution of peer-led interventions for improving retention in care among adolescents with TB and/or HIV?	97	94	97	91	90	<b>94</b>	<b>87</b>
4	What do adolescents need from health care providers to improve the accessibility and acceptability of HIV and TB services?	88	93	87	87	90	<b>89</b>	<b>79</b>
5	What programmatic interventions effectively improve adolescent retention in TB care and TB treatment adherence and completion?	88	90	87	87	90	<b>88</b>	<b>66</b>
6	How best can drugs be delivered to adolescents (eg. less frequent dosing) to overcome poor adherence?	78	87	87	83	80	<b>85</b>	<b>60</b>
7	What are the most effective ways for ART, TB medications, and other co-medications to be delivered to children and adolescents without overburdening the HIV care clinics?	78	83	83	80	80	<b>82</b>	<b>70</b>
8	What is the feasibility of establishing adolescent clinics for the management of tuberculosis, integrated with HIV and reproductive health services?	72	83	77	73	80	<b>78</b>	<b>70</b>
9	How effective and cost-effective is the integration of HIV and TB surveillance to enhance early detection and case management in adolescents?	100	100	94	88	78	<b>91</b>	<b>85</b>
10	How best can the delivery of school-based awareness sessions on TB/HIV and linkage of adolescents to care be implemented?	72	80	77	67	77	<b>75</b>	<b>58</b>
11	What is the best method of following up adolescents with infectious diseases?	44	73	73	70	73	<b>73</b>	<b>52</b>
12	How can we assess the bioavailability, bioequivalence, and allergenic properties of current benzathine penicillin brands in adolescents?	81	80	73	77	67	<b>74</b>	<b>58</b>
	<b>Communicable diseases intervention: implementation / delivery (mean)</b>	<b>82</b>	<b>88</b>	<b>86</b>	<b>82</b>	<b>83</b>	<b>85</b>	<b>72</b>
	<b>Communicable diseases (mean)</b>	<b>81</b>	<b>86</b>	<b>84</b>	<b>79</b>	<b>78</b>	<b>82</b>	<b>71</b>
	<b>Injuries and violence</b>							
	<b>Descriptive epidemiology</b>							
1	What are the risk and protective factors at various levels (individual, family, peer/social, community) for injuries and violence among adolescents LMICs?	73	95	90	82	80	<b>87</b>	<b>77</b>
2	What are the risk and protective factors associated with the increased risk of burn injuries among adolescent girls in many South Asian countries?	65	92	88	76	58	<b>80</b>	<b>66</b>
3	What is the incidence and risk and protective factors associated with fatal drowning among adolescents?	75	100	80	68	68	<b>80</b>	<b>72</b>
4	What are the prevalence and risk factors for cyber-bullying among adolescents in LMICs?	82	84	76	69	66	<b>75</b>	<b>64</b>
5	Do the same risk factors for perpetrating violence identified in many studies in HICs apply across LMICs?	87	74	71	72	74	<b>72</b>	<b>69</b>
6	What are the biological and ecological mechanisms that lead to protective/risk factors for, and good/poor outcomes after, adolescent injury and violence?	42	66	76	72	66	<b>71</b>	<b>56</b>
7	What are the long-term consequences of non-fatal traumatic injuries in adolescence?	97	84	66	61	63	<b>68</b>	<b>67</b>
8	What proportion of adolescents, particularly in LMICs, are unable to swim?	95	79	74	56	39	<b>64</b>	<b>65</b>
	<b>Injuries and violence descriptive epidemiology (mean)</b>	<b>77</b>	<b>84</b>	<b>78</b>	<b>70</b>	<b>64</b>	<b>75</b>	<b>67</b>
	<b>Intervention: Discovery</b>							
1	What are the interventions and programmes that influence multiple risk behaviours and health outcomes for injuries and violence in adolescents?	56	81	83	69	67	<b>77</b>	<b>60</b>
2	How do increased employment opportunities cause reductions in violence among young people?	78	81	69	58	89	<b>74</b>	<b>69</b>
3	Could (electronic) decision support systems be utilised within primary care facilities to identify, refer and manage adolescents at high risk of injuries and violence?	83	89	83	47	47	<b>70</b>	<b>62</b>
4	How do adolescents perceive danger and peace in their communities, and what are their suggestions for how to reduce the dangers?	81	83	64	53	67	<b>66</b>	<b>60</b>
5	How can new methods best be applied to adolescent research to rigorously and more quickly help us identify program success: eg. pragmatic trials; mixed methods; etc?	58	64	61	64	58	<b>62</b>	<b>44</b>

6	Wrist fracture is an extremely common, disruptive and potentially disabling injury to adolescents in the course of many high risk activities and is highly preventable by the use of wrist guards (approx 90% effective), but current designs do not allow grip of objects. Can an effective and affordable wrist guard be designed, developed and distributed which allows grip (e.g. of bicycle handlebars, climbing frames, tree branches)?	72	72	58	58	53	60	51
	<i>Injuries and violence intervention: discovery (mean)</i>	71	78	70	58	63	68	58
	<b>Intervention: Development / Testing</b>							
1	To what extent do strategies that have been shown to reduce one form of violence (e.g., bullying) effectively prevent other forms of violence that youth experience (e.g., partner violence, sexual violence, suicidal behaviour)?	92	83	86	72	75	81	72
2	What specific behaviour modification strategies are effective in reducing risk taking behaviour and exposure to injury and violence?	72	83	83	75	64	78	66
3	Can swimming and water survival training be effectively implemented in late primary or early secondary school in LMICs in high risk/high need communities, and do such programmes have an intergenerational effect by also protecting subsequent generations of children by transfer of awareness, skills, knowledge, rescue techniques?	83	89	81	69	64	77	66
4	What is the impact of gender-based violence prevention programs on rape among adolescents in LMICs?	89	83	78	67	72	76	68
5	Are community based programs related to drug and alcohol use and resilience that also reduce road injury that have been demonstrated to be effective in HICs also effective in LMICs?	58	76	74	65	71	72	58
6	What is the effectiveness of improving accessibility to buildings/schools for adolescents with disability due to injuries?	75	79	69	58	75	71	64
7	What are the effective uses of m-health to reduce/prevent the burden of injuries and violence among adolescents?	75	76	74	68	59	70	58
8	Can sports organisations (e.g. football clubs) be harnessed to develop interventions for the prevention of a range of adolescent injuries (such as road traffic injuries, violence related injuries) as well as sports injuries?	81	78	72	64	56	68	59
9	Can feasible, evidence-based, tiered-risk (universal/selective/indicated) injury-prevention strategies be developed for adolescent interventions that go beyond universal interventions that meet the typical needs of members of a population to target interventions that meet the needs of individuals?	19	53	50	50	44	49	50
	<i>Injuries and violence intervention: development/testing (mean)</i>	72	78	74	65	64	71	62
	<b>Intervention: Implementation / Delivery</b>							
1	What are the barriers and facilitators to increasing compliance with motorcycle helmet legislation?	100	94	91	91	75	88	86
2	How best can school-based 'safe routes to school' initiatives be scaled up to include larger numbers of schools and to be incorporated with community-based initiatives?	97	80	83	83	80	82	80
3	What types of communication strategies work best to actually change the key behaviours that put adolescents at increased risk of injuries?	88	88	91	78	56	81	75
4	What are the particular challenges facing organizations in LMICs related to implementing interventions for injuries and violence?	91	94	66	72	84	77	75
5	How can effective injury and violence prevention programmes that have been developed and evaluated as being effective at a local level be scaled-up to national level?	84	88	78	75	63	76	70
6	Disabled adolescents, or those in homes with a parent or other family member who is disabled, are often prevented from seeking education. Social support programs and home education have been used in HIC settings. How can these or other ideas be applied to LMICs?	83	77	70	73	73	73	65
7	Can interventions (e.g., life skills for conflict resolution) effectively be delivered through systems adolescents routinely use (e.g., schools)?	91	81	69	72	53	69	66
8	What are the organizational and community capacities that are necessary for evidence-based approaches to be implemented with fidelity, and how do research-to-practice supports build these capacities?	59	75	70	63	56	67	53
9	What is the cost-benefit ratio of interventions to reduce the incidence of adolescent injury?	81	84	53	69	59	64	64
10	What is the extent of implementation of violence prevention activities in LMICs?	77	70	50	60	77	62	63
	<i>Injuries and violence intervention: implementation/delivery (mean)</i>							
	<b>Health policy &amp; health and social systems</b>							
1	How best can brief alcohol interventions be combined with brief violence reduction interventions and be effectively delivered through the health system, when adolescents present with injuries?	77	83	82	79	70	79	70
2	How best can the opinions of many organisations involved with adolescents be changed to include a focus on injuries?	70	83	82	68	60	75	64
3	What factors play the most important roles in improving use of health services by victims of Interpersonal violence?	83	83	75	71	70	75	70
4	What are key social, behavioural, public health and public policy solutions to reduce exposure to, and improve coping with, chronic and traumatic stress exposure?	87	90	75	61	63	73	70
5	What are key sources of chronic and traumatic stress among adolescents in LMICs?	97	87	71	57	77	73	74

6	By what means can the WHO Fatal Injury Surveillance Guidelines for Hospitals and Mortuaries and other methods such as verbal autopsies be effectively implemented, sustained and brought to scale in LMICs to provide more reliable counts and detailed causes and circumstances of death to inform policy and preventive action for adolescents?	90	80	71	68	70	72	71
7	How do we prevent and/or reduce adolescent exposure to violence, and improve the health coping responses of young people who have experienced violence and trauma?	80	83	68	57	70	70	70
8	What are sustainable models to ensure that the developmental needs of adolescents are incorporated into the physical care for adolescents who have sustained injuries due to any cause in various care settings (adult, community or paediatric)?	60	77	61	61	63	65	62
9	What are the costs (financial, economic) related to care for injuries sustained by adolescents in LMICs?	100	87	61	54	57	64	74
	<b>Injuries and violence health policy, health &amp; social systems (mean)</b>	<b>83</b>	<b>84</b>	<b>72</b>	<b>64</b>	<b>67</b>	<b>72</b>	<b>69</b>
	<b>Injuries and violence (mean)</b>	<b>78</b>	<b>82</b>	<b>73</b>	<b>67</b>	<b>65</b>	<b>72</b>	<b>66</b>
<b>Mental health</b>								
<b>Descriptive epidemiology</b>								
1	What are the risk and protective factors for mental health problems among adolescents with developmental disorders (e.g. developmental delay, autism) in LMIC?	95	89	84	82	84	85	80
2	Do geographic and socio-cultural variables modulate prevalence and/or outcomes of mental health and developmental challenges?	70	76	72	83	82	77	66
3	What are the most important protective factors that promote psycho-social well-being and resilience in LMIC adolescents, with a focus on the community level?	70	86	75	73	73	77	71
4	What individual and environmental factors determine continuity or discontinuity of antisocial behaviour in adolescents into adulthood?	87	76	83	72	61	75	65
5	What are the current levels and trends in prevalence of mental health disorders in adolescents in LMICs?	91	89	65	57	76	71	70
6	What are the social, economic and health outcomes in adulthood of different populations (e.g. school-going adolescents, out-of-school adolescents, adolescents with intellectual disabilities) who suffer from mental health problems during adolescence?	87	83	57	68	82	69	66
7	What is the burden of depression and of post-traumatic stress disorder among adolescents in LMIC?	87	80	59	48	65	63	58
8	What is the correlation between playing sports and mental health among adolescents?	80	65	57	48	43	54	50
	<b>Mental health: descriptive epidemiology (mean)</b>	<b>84</b>	<b>81</b>	<b>69</b>	<b>66</b>	<b>71</b>	<b>71</b>	<b>66</b>
<b>Intervention: Discovery</b>								
1	What are the reasons for the high prevalence of conduct disorders in childhood in some low-resource communities, and their relationship to violence perpetration in subsequent adolescence?	74	76	79	62	71	73	61
2	How do the incidence and prevalence of the most common mental disorders contribute to the levels of adolescent mortality and morbidity?	83	86	57	52	69	65	61
3	What is the aetiology of mental health problems in adolescents, in particular in relation to the interaction between neurodevelopmental factors and the social environment?	64	69	71	55	55	64	52
4	Which antipsychotic drugs will effectively treat both positive (hallucinations, delusions, thought disorders, movement disorders) and negative symptoms (flat affect, lack of pleasure in everyday life, lack of ability to begin and sustain planned activities, speaking little even when forced to interact) in adolescent schizohrenia?	81	74	76	43	38	62	60
5	What are the effects of psychotherapy designed specifically for adolescents as measured by neuroimaging?	74	76	43	29	24	43	57
6	Are currently discovered genetic risk factors for mental health generalizable in LMICs?	67	52	36	31	26	36	53
	<b>Mental health: intervention: discovery (mean)</b>	<b>74</b>	<b>72</b>	<b>60</b>	<b>45</b>	<b>47</b>	<b>57</b>	<b>57</b>
<b>Intervention: Development / Testing</b>								
1	What would be the most cost-effective, affordable and feasible package of interventions for promotion of mental health and prevention of mental health disorders among adolescents?	92	95	100	92	86	94	88
2	What are effective interventions to prevent and treat mental health problems of adolescents that can be delivered at primary care level in LMICs?	100	97	89	87	82	89	88
3	What are effective interventions addressing self-harm/suicide in adolescent girls in LMICs?	97	87	97	79	76	87	82
4	What is the effectiveness of parenting programmes in the prevention of mental health disorders in adolescents?	95	95	95	79	66	86	81
5	What are effective and evidence-based screening, prevention, and treatment interventions for adolescents with neurodevelopmental disorders and intellectual disabilities (and their families) that can be delivered in various settings?	79	84	89	84	79	85	72



	<b>Mental health (mean)</b>	<b>84</b>	<b>82</b>	<b>78</b>	<b>68</b>	<b>65</b>	<b>74</b>	<b>68</b>
<b>Non-communicable disease management</b>								
<i>Descriptive epidemiology</i>								
1	What are the mortality and morbidity rates and their causes amongst adolescents with diabetes in low- and middle-income countries?	91	77	77	86	77	79	78
2	What proportion of children born with sickle cell disease survive into and through adolescence?	86	91	77	77	68	78	67
3	How does the prevalence of non-communicable diseases change during adolescence by age and sex?	55	75	90	65	60	76	61
4	How aware are young people of the relationship between NCD risk factors and development of NCDs?	77	82	68	68	64	70	56
5	What is the prevalence of hypertension and pre-hypertension among adolescents in low- and middle-income countries, particularly within Africa?	86	73	60	60	70	65	57
	<b>NCD management descriptive epidemiology (mean)</b>	<b>79</b>	<b>80</b>	<b>75</b>	<b>71</b>	<b>68</b>	<b>74</b>	<b>64</b>
<i>Intervention: Discovery</i>								
1	Can a low cost rapid antigen test for diagnosis of streptococcal pharyngitis (which can lead to rheumatic heart disease) be developed that is suitable for use in low resource settings?	95	95	86	86	77	86	84
2	Are there biological changes (markers) heralding NCDs in adolescents, and how early can these be detected?	64	91	82	55	73	77	65
3	Is it possible to develop a low-cost, accurate blood glucose point-of-care test (end-user cost USD 0.10 or less per test)?	82	82	75	75	60	73	63
4	What is the effectiveness of motivational interviewing in supporting adolescents adherence to treatment of NCDs in various settings (e.g. LMICs)?	68	90	70	60	50	68	59
5	How best can the physical and psychological well-being of adolescents with rheumatic heart disease be measured?	68	77	64	59	73	68	56
	<b>NCD management intervention: discovery (mean)</b>	<b>75</b>	<b>87</b>	<b>75</b>	<b>67</b>	<b>67</b>	<b>74</b>	<b>65</b>
<i>Intervention: Development / Testing</i>								
1	Can interventions for the management of NCDs that have been shown to be effective in adults be used directly in adolescents?	86	85	95	75	75	85	73
2	What is the optimal level of inclusion (or not) of parents/guardians in the care of adolescents with NCDs?	73	77	73	77	59	72	62
3	What is the impact on the reproductive choices of sensitizing adolescents with sickle cell disease to this issue?	55	59	55	59	50	55	42
	<b>NCD management intervention: development/testing (mean)</b>	<b>71</b>	<b>74</b>	<b>74</b>	<b>70</b>	<b>61</b>	<b>71</b>	<b>59</b>
<i>Intervention: Implementation / Delivery</i>								
1	How do interventions devised for the management of NCDs in high income countries be used for adolescents in low- and middle- income countries translate globally?	91	100	86	73	64	82	71
2	What are existing effective programs in low- and middle-income countries that manage adolescents with diabetes, determining successful strategies?	32	80	80	75	75	78	65
3	How can social media and other information technologies be used to improve the delivery and effectiveness of health interventions for the prevention and management of NCD risk factors and NCDs in adolescents?	32	70	70	65	60	67	51
	<b>NCD management intervention: implementation/delivery (mean)</b>	<b>52</b>	<b>83</b>	<b>79</b>	<b>71</b>	<b>66</b>	<b>76</b>	<b>62</b>
<i>Health policy &amp; health and social systems</i>								
1	What interventions are effective in improving access to the medicines and supplies needed to manage diabetes and other endocrine disorders in adolescents?	80	89	78	72	72	78	65
	<b>NCD management (mean)</b>	<b>71</b>	<b>82</b>	<b>76</b>	<b>70</b>	<b>66</b>	<b>74</b>	<b>63</b>
<b>Nutrition</b>								
<i>Descriptive epidemiology</i>								
1	What are the causes of anaemia among adolescent girls and how does this vary by region?	98	85	93	92	93	91	87
2	What are the relationships between early pregnancy and stunting, anaemia, and NCD risk (overweight, diabetes, hypertension)?	89	97	87	89	79	88	84
3	How does the burden of disease from nutritional causes for adolescent boys and girls vary by country and within countries, and by socio-economic status?	85	80	80	89	95	85	83

4	What is the prevalence of adolescent under-nutrition and over-nutrition by risk/protective factors such as sex, urban/rural residence, schooling, access to green spaces, access to food and socio-economic strata in different world regions?	88	85	83	74	88	82	78
5	What are the associations between adolescent girls' schooling and the burden of malnutrition (over and under)?	83	80	73	71	75	74	69
6	What are the most important nutritional factors leading to non-communicable diseases (NCDs)?	60	73	73	66	53	67	55
7	What are the roles of vitamin D and calcium nutritional status in adolescents in the aetiology of diabetes and cardiovascular diseases that appear later in life?	78	73	75	66	40	66	60
8	Do nutrition-related risk factors for non-communicable diseases cluster in families?	73	73	63	66	63	65	53
9	What are the most important factors explaining linear catch-up growth during adolescence?	78	70	63	66	55	63	55
	<b>Nutrition descriptive epidemiology (mean)</b>	<b>81</b>	<b>79</b>	<b>76</b>	<b>75</b>	<b>71</b>	<b>76</b>	<b>69</b>
	<b>Intervention: Discovery</b>							
1	What ante-natal interventions can be developed to help support the specific health and nutritional needs of adolescent pregnant girls in developing countries?	84	79	82	74	82	80	71
2	How do we improve compliance and acceptability of iron supplementation programmes among adolescents (eg. design supplements with lower dose iron, different form such as powders, fewer side effects etc)?	95	82	84	79	66	79	74
3	What interventions that are effective in improving the nutritional status of women of reproductive age are also effective in improving the nutritional status of girls 10-14 years and 15-19 years?	82	84	84	75	63	78	69
4	How can social media and social networks be used efficiently and effectively as a tool for improving nutritional behaviour change communication related to adolescent nutrition?	89	83	82	78	58	76	67
5	What are the primary drivers of the sex differences in the patterns of obesity onset over the course of adolescence and early adulthood?	100	89	64	53	66	68	66
6	What are the most effective interventions during infancy that would improve the dietary food habits and nutritional status of adolescents?	61	74	61	68	61	65	51
7	What are effective strategies to promote a healthy diet for a healthy lifestyle in middle income countries?	63	74	61	61	55	62	49
8	What are the most useful anthropometric measurements to use in adolescents?	76	71	53	56	61	59	55
9	What is the role of sex hormones in the changes in nutritional risk factors for non-communicable diseases that take place during adolescence?	71	71	42	39	37	47	49
10	How should dietary change be evaluated in adolescents?	63	61	42	42	34	44	49
	<b>Nutrition intervention: discovery (mean)</b>	<b>78</b>	<b>77</b>	<b>65</b>	<b>62</b>	<b>58</b>	<b>66</b>	<b>60</b>
	<b>Intervention: Development / Testing</b>							
1	What social and behaviour change communication platforms are the most effective to reach adolescents to help them to improve their diet?	85	98	93	73	73	86	75
2	How do nutrition interventions during adolescent antenatal and postnatal visits impact on birth outcome, maternal, neonatal and child health?	80	88	84	79	70	81	70
3	What are the most effective interventions for preventing and reducing overweight/obesity in adolescents either in schools or out-of-school?	88	80	78	78	83	79	72
4	What counselling messages are effective to help adolescents adhere to a lifestyle of healthy eating and regular physical activity and maintain a healthy weight?	83	83	75	75	73	76	62
5	What are effective interventions that can be delivered in primary care to prevent and treat overweight and obesity in adolescents?	75	75	78	70	75	75	60
6	What is the effect of the delivery of additional micronutrients (e.g. fortified food product, lipid-based nutrient supplements, multiple micronutrient tablets) on adolescent girls' micronutrient status and cognitive function (with a special focus on adolescent girls younger than 15-19 years, for whom data are particularly scarce)?	82	82	76	66	72	75	65
7	What is the effectiveness of multiple micronutrient supplements for adolescent girls delivered at scale?	70	78	78	63	68	73	59
8	What is the impact of post-1000 days pre-pubertal multicomponent interventions (nutrition, water, sanitation, & hygiene) on linear catch-up growth during adolescence?	75	73	73	63	75	71	55
9	What is the effect of increased taxes on unhealthy foods in combination with decreased taxes on fruits and vegetables on the weight of adolescents?	85	68	75	70	68	71	58
10	What impact does increasing taxes on tobacco, sugar sweetened beverages and ultra processed foods have on the adoption of healthy lifestyles by adolescents (and children), (including not smoking, reducing sugar, salt and fat intake, increasing physical activity, and maintaining a healthy body weight)?	78	73	73	73	63	70	57
11	What should be in national strategies and food guidelines to promote healthy diets for the poorest adolescents (adapted to the food available in their communities)?	63	73	65	70	73	69	53
12	What is the effectiveness of economic instruments to incentivise the new production and commercialization of healthy foods among adolescents?	73	73	66	63	60	65	57

13	What is an effective intervention to improve dietary quality and nutritional status among adolescent girls, where the whole household, in particular the household head, is approached with information about the importance of adequate nutrition and health throughout the life cycle?	50	66	60	60	55	60	47
	<b>Nutrition intervention: development/testing (mean)</b>	<b>76</b>	<b>77</b>	<b>75</b>	<b>69</b>	<b>70</b>	<b>73</b>	<b>61</b>
	<b>Intervention: Implementation / Delivery</b>							
1	How can community-based adolescent obesity prevention programmes be better implemented and scaled up?	78	85	80	75	78	80	64
2	What approaches can be used to expand secondary school health/nutrition programs to also include adolescents not enrolled in school?	78	83	73	73	83	77	67
3	How can a package of evidence based interventions be delivered at scale to prevent adolescent malnutrition?	70	75	76	75	73	75	58
4	Can community-based projects be effective in changing adolescents' understanding of, and attitudes towards, dietary quality?	78	83	74	70	70	74	63
5	How to improve access and utilization to existing supplemental food programs/nutrition supplements, counseling and services to improve quantity and quality of food and nutrient intake?	60	73	60	55	63	62	52
6	Does adding more nutritionists to the health system improve the food habits of adolescents and reduce the burden of undernutrition/overnutrition/malnutrition among adolescents?	68	68	65	55	55	62	51
7	What is the role of overweight and obesity screening and interventions for adolescents in settings other than in health facilities?	58	63	60	63	63	62	51
8	What is the best method for testing the effectiveness of behavioural strategies to improve diet and physical activity?	70	75	60	55	35	57	51
9	How can we best develop and test the effectiveness of strategies to teach adolescents to understand the true meaning of, and motives behind, communication messages (such as advertising, internet etc.)?	43	58	45	40	43	46	47
	<b>Nutrition intervention: implementation/delivery (mean)</b>	<b>67</b>	<b>73</b>	<b>66</b>	<b>62</b>	<b>62</b>	<b>66</b>	<b>56</b>
	<b>Health policy &amp; health and social systems</b>							
1	What are the barriers to inclusion of an increased focus on adolescent nutrition in health and/or social systems?	73	83	78	70	78	77	65
2	How does improvement in agricultural yield and women's empowerment contribute to improving the nutrition of adolescents?	88	85	70	65	78	74	64
3	What are the key factors associated with an effective regulatory intervention for prevention of adolescent obesity?	68	73	70	68	75	71	55
	<b>Nutrition health policy, health &amp; social systems (mean)</b>	<b>76</b>	<b>80</b>	<b>73</b>	<b>68</b>	<b>77</b>	<b>74</b>	<b>61</b>
	<b>Nutrition (mean)</b>	<b>76</b>	<b>77</b>	<b>71</b>	<b>67</b>	<b>66</b>	<b>71</b>	<b>61</b>
	<b>Physical activity</b>							
	<b>Descriptive epidemiology</b>							
1	Considering comprehensive theoretical models and variables from different levels/systems/contexts (e.g., Socio-ecological Model), which variables predict, at an individual or population level, the different patterns of physical activity in adolescents living in low- and middle-income countries?	91	100	100	100	100	100	98
2	What are the global and regional levels and trends in physical activity (by type and degree) among adolescents over time and also by age, both at a population level (eg. repeated cross-sectional studies) and in the same individuals over time (ie. longitudinal studies) in LMICs?	91	91	95	73	95	90	85
3	What are the knowledge, attitudes and beliefs about the benefits of physical activity among adolescents in low- and middle-income countries?	91	91	82	91	95	88	84
4	Does physical activity performed in early life (childhood and adolescence) prevent diseases in adulthood, independent of the adult's physical activity?	100	100	91	86	68	87	87
5	Which level and type of physical activity is optimal for the development and health of adolescents?	64	77	73	68	68	72	64
6	Do physical activity, sedentary behaviour, and cardiorespiratory fitness of adolescents modify the association between BMI (and central adiposity) and other health outcomes, including impaired glucose metabolism and blood pressure?	77	82	68	68	50	67	64
7	What is the prevalence of overweight and obesity, and of metabolic syndrome among adolescents (in-school and out-of-school) and their relationship with weekly physical activity?	82	64	55	68	59	60	64
	<b>Physical activity descriptive epidemiology (mean)</b>	<b>85</b>	<b>86</b>	<b>81</b>	<b>79</b>	<b>77</b>	<b>81</b>	<b>78</b>
	<b>Intervention: Discovery</b>							



1	What is the best (feasibility, cost, acceptability, effectiveness, sustainability) design of a school-based intervention that aims to engage and gain the support of students, parents and teachers for young people to take the recommended 60 minutes of physical activity daily, and to ensure that there are at least two physical education (PE) classes within schools per week, with at least 50% of the time for PE classes spent in moderate-to-vigorous intensity physical activity)?	70	100	100	100	100	100	94
2	What is the best design of an intervention with the central theme "Healthy Students Study Better" that aims to link the central concerns of parents and teachers for healthy lifestyles, including physical activity, to a better capacity for students to learn?	75	90	90	75	85	86	72
3	Which theoretical and evidence-based framework should guide decision-making on the most effective strategies and the most relevant types/domains of physical activity to reduce physical inactivity among adolescents living in low- and middle-income countries?	95	90	90	85	72	85	75
4	What are the effectiveness and cost-effectiveness of an innovative intervention to reduce sedentary behaviour and promote leisure time physical activity that draws on a culturally relevant model?	80	80	85	85	85	84	68
5	What is the relationship between cognitive development and physical activity/exercise in children and adolescents?	100	90	85	85	65	82	80
6	What is the importance of epigenetic pathways in the prevention of diseases through physical activity?	85	95	65	61	75	73	65
7	Is physical activity causally associated with health outcomes (e.g. obesity and cardiovascular risk factors) in young people in low and middle-income countries?	70	75	60	61	33	58	62
	<b>Physical activity intervention: discovery (mean)</b>	<b>82</b>	<b>89</b>	<b>82</b>	<b>79</b>	<b>74</b>	<b>81</b>	<b>74</b>
	<b>Intervention: Development / Testing</b>							
1	What are the effects of daily physical education and recreation on total physical activity levels, physical fitness, cognitive development, and school performance among children and adolescents?	90	95	95	90	90	93	86
2	What works in co-producing (ie. working with young people to design) interventions to promote physical activity in young people from low and middle-income families?	80	85	90	90	85	88	84
3	What is the effectiveness, cost-effectiveness and sustainability of interventions to increase physical activity and reduce sedentary behaviour in adolescents, across the domains of increased walking and cycling (active transport), school-based physical activity and fundamental movement skill development in schools, and reduction of screen time and other sedentary behaviour?	50	90	90	80	80	86	70
4	How effective are behavioural interventions to promote physical activity in achieving weight loss in obese adolescents?	85	85	85	80	80	83	76
5	Which variables mediate (i.e., explain) changes in physical activity after an intervention to promote physical activity among adolescents living in low- and middle-income countries?	80	85	75	85	80	80	76
6	Is physical activity associated with cognitive and brain development health in children and adolescents?	90	85	85	75	70	80	70
7	How can retention be increased in intervention studies designed to increase physical activity in adolescents?	80	90	75	70	65	75	72
8	How effective are physical activity media campaigns for increasing physical activity among adolescents?	90	85	85	60	60	75	74
9	What is the role of muscle building physical activity in reducing diabetes risk factors?	70	70	65	50	35	57	54
10	Is high intensity intermittent exercise, associated with endurance training, effective for reducing adipose tissue in obese adolescents?	80	70	55	55	35	54	60
11	Is high intensity intermittent training in a cold environment effective in reducing adipose tissue in obese adolescents?	75	65	35	35	35	41	60
	<b>Physical activity intervention: development/testing (mean)</b>	<b>79</b>	<b>82</b>	<b>76</b>	<b>70</b>	<b>65</b>	<b>74</b>	<b>71</b>
	<b>Intervention: Implementation / Delivery</b>							
1	How best can the capacity of the education sector be improved to deliver high quality physical education programs within schools?	89	100	100	94	94	98	93
2	How does one best implement a sustainable, structured physical activity program for adolescents in schools and out of schools in LMICs?	78	100	100	100	89	98	93
3	How best can parents, teachers, and policymakers be engaged in creating physical activity-friendly school environments for children and adolescents?	100	89	100	89	94	94	91
4	What are scalable and sustainable approaches to improve physical activity in children and adolescents, particularly in low-to-middle income countries?	89	83	94	100	100	94	91
5	How can effective local interventions for increasing physical activity in adolescents best be scaled up for national and cross-national implementation?	100	100	94	94	83	93	91
6	What are adolescents' preferences for type of physical activities by community and the relationship of this to their cultural background?	89	94	94	89	89	92	84
7	What is the level of governments' investment in the training of personnel, capacity development and provision of equipment and facilities, for the promotion of physical activity in schools, clubs and communities?	78	83	83	78	83	82	76
	<b>Physical activity intervention: implementation/delivery (mean)</b>	<b>89</b>	<b>93</b>	<b>95</b>	<b>92</b>	<b>90</b>	<b>93</b>	<b>89</b>

	<b>Health policy &amp; health and social systems</b>								
1	What are the policy and/or environmental changes that influence physical activity among adolescents in low- and middle-income countries?	100	100	100	94	94	<b>98</b>	<b>96</b>	
2	How best can physical exercise programs for children and adolescents be initiated in public health care systems?	89	94	89	89	89	<b>90</b>	<b>82</b>	
3	How can the policies of various sectors align and interact to promote physical activity and health in adolescents living in low- and middle-income countries?	67	83	89	89	94	<b>89</b>	<b>78</b>	
4	How best can the recommended number (three times per week for all school-age adolescents) of high-quality physical education classes be delivered worldwide?	72	78	78	67	78	<b>76</b>	<b>73</b>	
	<b>Physical activity health policy, health &amp; social systems (mean)</b>	<b>82</b>	<b>89</b>	<b>89</b>	<b>85</b>	<b>89</b>	<b>88</b>	<b>82</b>	
	<b>Physical activity (mean)</b>	<b>83</b>	<b>87</b>	<b>83</b>	<b>80</b>	<b>77</b>	<b>82</b>	<b>78</b>	
	<b>Substance use</b>								
	<b>Descriptive epidemiology</b>								
1	What are the risk factors contributing to adolescents' substance use in the different world regions?	73	86	91	86	91	<b>89</b>	<b>78</b>	
2	Are there distinct patterns of and factors leading to substance use (tobacco and other substances) among in- and out-of-school female adolescents and male adolescents? (These include: context of use, preferred substance, use related practices, among others)	64	91	91	77	82	<b>86</b>	<b>75</b>	
3	How does consumption of alcohol and other substances among adolescents change over time when alcohol and other drug policies change?	85	85	85	90	80	<b>85</b>	<b>78</b>	
4	What are the main predictors of the transition from alcohol first use to the binge drinking pattern of use?	100	75	85	80	70	<b>79</b>	<b>74</b>	
5	What is the prevalence of inhalant use by adolescents by age and sex? What is the prevalence of shisha smoking in adolescents?	82	91	86	82	45	<b>78</b>	<b>71</b>	
6	What are the recent and predicted future trends in the prevalence of adolescent substance use disorders?	82	77	77	73	64	<b>74</b>	<b>62</b>	
7	What factors predispose an individual to the use of substances and influence the onset of substance use and continued use of substances?	65	80	75	70	55	<b>71</b>	<b>58</b>	
8	What is the burden of illicit substance use among adolescents?	68	64	73	64	64	<b>67</b>	<b>58</b>	
9	What are the family-based factors related to adolescent drug abuse?	68	68	68	64	55	<b>65</b>	<b>58</b>	
	<b>Substance use descriptive epidemiology (mean)</b>	<b>76</b>	<b>80</b>	<b>81</b>	<b>76</b>	<b>67</b>	<b>77</b>	<b>68</b>	
	<b>Intervention: Discovery</b>								
1	What prevention and treatment services related to substance use are acceptable to adolescents?	95	95	100	100	95	<b>98</b>	<b>95</b>	
2	Is the use of electronic substitutes for nicotine delivery by adolescents a gateway or replacement mechanism for smoking?	91	86	91	91	73	<b>86</b>	<b>80</b>	
3	What are the most effective strategies for evaluating community-based interventions for reducing the burden of substance use among adolescents?	91	86	86	86	82	<b>85</b>	<b>82</b>	
4	What are the effects of inhalant use during adolescents on the cognitive and affective functions of the brain?	77	77	68	68	64	<b>69</b>	<b>65</b>	
5	What are the unique needs of adolescents with drug addiction, relative to other age groups?	77	77	68	64	64	<b>68</b>	<b>64</b>	
6	How do substance use disorders affect brain functions among young people?	68	68	77	59	59	<b>68</b>	<b>58</b>	
7	What are the main genetic factors associated with binge drinking and how does social inequality moderate such genetic influences?	64	64	64	59	64	<b>63</b>	<b>53</b>	
8	Should brain imaging be used to monitor recovery (pre and post) from substance abuse in adolescents, and, if so, how?	64	59	50	55	50	<b>53</b>	<b>44</b>	
	<b>Substance use intervention: discovery (mean)</b>	<b>78</b>	<b>77</b>	<b>76</b>	<b>73</b>	<b>69</b>	<b>74</b>	<b>68</b>	
	<b>Intervention: Development / Testing</b>								
1	What is the efficacy and effectiveness of a screening instrument linked to a brief intervention for alcohol use among adolescents for use in primary care settings?	77	91	86	91	82	<b>87</b>	<b>78</b>	
2	What is the effectiveness of programmes assisting parents in the management of adolescents with substance use disorders?	77	86	86	86	77	<b>85</b>	<b>78</b>	
3	Which behavioural interventions are most effective in preventing and/or curtailing the use of inhalants among adolescents?	77	86	86	82	68	<b>82</b>	<b>76</b>	
4	What are effective school-based programmes incorporating attention to social norms and life skills training that prevent binge drinking among adolescents in different contexts?	68	82	86	86	68	<b>82</b>	<b>71</b>	
5	Which interventions influence attitudes of adolescents towards use of substances?	77	82	82	82	73	<b>80</b>	<b>69</b>	

6	What is the effectiveness of the implementation of measures contained in the WHO Framework Convention on Tobacco Control on tobacco use among adolescents in LMICs?	77	82	82	82	68	79	69
7	How can social marketing strategies delay the initiation of alcohol use and/or deter evolution of occasional consumption to excessive consumption among adolescents?	68	82	86	73	59	77	69
	<b>Substance use intervention: development/testing (mean)</b>	<b>75</b>	<b>84</b>	<b>85</b>	<b>83</b>	<b>71</b>	<b>82</b>	<b>73</b>
	<b>Intervention: Implementation / Delivery</b>							
1	What is the effectiveness of implementation of youth friendly services interventions on substance use?	77	91	91	91	82	89	76
2	What is the impact of peer education on reducing substance abuse in young people?	91	86	91	86	68	84	80
3	Is sales restriction of inhalant products effective in reducing inhalant abuse among youth?	85	85	85	85	70	82	76
4	How can effective prevention interventions for adolescents be developed and implemented in countries with limited resources and system capacity?	80	85	85	85	70	82	74
5	How can primary care practitioners' reluctance to undertake screening and brief interventions of adolescents in relation to substance use best be overcome?	64	73	82	82	82	80	67
6	What is the extent of coverage of interventions with known effectiveness for reducing adolescent substance use?	73	86	77	73	68	77	67
7	Can skill-building and livelihood interventions become an incentive for adolescents from tobacco farming families to stop farming tobacco?	80	75	75	70	70	73	58
8	How can research activities support ongoing activities of practitioners working to address substance use in adolescents?	77	77	73	73	64	72	65
9	How to scale up effective parenting education (roles, responsibilities, supervisory role, use of non-violent approaches, effective communication) to prevent early initiation or excessive consumption of alcohol and other substance use in adolescents?	36	64	59	64	55	60	53
	<b>Substance use intervention: implementation/delivery (mean)</b>	<b>74</b>	<b>80</b>	<b>80</b>	<b>79</b>	<b>70</b>	<b>78</b>	<b>69</b>
	<b>Health policy &amp; health and social systems</b>							
1	What is the role of social media/online advertising in adolescents' uptake of alcohol or tobacco?	90	90	85	80	80	84	80
2	What is the extent of adolescents' access to and utilization of smoking cessation services in LMIC?	70	90	85	80	80	84	72
3	To what extent do national health policies in LMICs address substance use by adolescents?	60	85	85	80	80	83	62
4	What are the factors associated with retention in outpatient treatment for drug dependency among adolescents?	90	85	80	85	75	81	68
5	How can primary care practitioners' unwillingness to undertake screening and brief interventions of adolescents in relation to substance use best be overcome?	75	75	75	80	75	76	70
	<b>Substance use health policy, health &amp; social systems (mean)</b>	<b>77</b>	<b>85</b>	<b>82</b>	<b>81</b>	<b>78</b>	<b>82</b>	<b>70</b>
	<b>Substance use (mean)</b>	<b>76</b>	<b>81</b>	<b>80</b>	<b>78</b>	<b>70</b>	<b>78</b>	<b>69</b>
	<b>Adolescent health: policy, health and social systems</b>							
	<b>Descriptive epidemiology</b>							
1	What is the coverage of primary health care services for adolescents?	79	94	85	76	86	85	79
2	How do adolescents use information technologies (e.g. web, traditional and social media), and what implications does this have for their health behaviour, and for the design of interventions?	80	93	89	84	68	84	75
3	How is adherence to medicines among adolescents for long-term conditions affected by access to medicines and information, shared decision-making, and cost?	75	86	78	71	83	79	69
4	What is the role of structural determinants, in particular, employment and educational opportunities and gender disadvantage, on health outcomes among adolescents?	73	76	68	70	78	72	62
5	What are the health effects of attendance and active engagement in school/college on adolescents in LMICs, and how are these affected by the characteristics of the education and school/college environment?	53	79	64	64	68	68	52
6	How does the lack of employment lead to adverse health consequences?	76	74	58	54	76	64	57
	<b>Adolescent health: policy, health and social systems descriptive epidemiology (mean)</b>	<b>73</b>	<b>84</b>	<b>74</b>	<b>70</b>	<b>76</b>	<b>76</b>	<b>66</b>
	<b>Intervention: Discovery</b>							
1	What is exposure to agricultural chemicals doing to adolescent's brains and pubertal development?	71	81	71	60	68	70	57
2	How best can adolescents in LMICs be recruited and engaged in intervention studies?	77	82	71	65	60	70	62
3	How best can the multiple positive and/or negative effects of interventions designed to improve adolescent health be evaluated?	46	68	60	59	50	60	45
	<b>Adolescent health: policy, health and social systems intervention: discovery (mean)</b>	<b>65</b>	<b>77</b>	<b>67</b>	<b>62</b>	<b>59</b>	<b>67</b>	<b>55</b>

	<b>Intervention: Development / Testing</b>								
1	What are the most cost-effective interventions to decrease multiple health-risk behaviours and conditions and promote healthy behaviours?	82	92	92	91	73	88	80	
2	How can we develop health systems to interact with adolescents in both traditional (in person) and innovative (virtual) ways to promote positive health choices and prevent illness?	78	91	89	86	71	85	73	
3	What are the key interventions that should be part of routine school health service provision?	83	87	86	81	69	82	73	
4	How best should curricular-based programmes that can reduce adolescent mental problems and promote positive youth development be conceived, developed, implemented and evaluated?	63	80	80	76	61	76	59	
5	What level and type of participation of adolescents in health policy, programme development and service delivery is most effective in different political and cultural environments?	70	86	70	71	61	72	59	
6	How best can girls' and boys' participation and active engagement in quality education be improved?	62	74	71	62	71	70	55	
7	What are the most effective approaches to leveraging the developmental window of opportunity for social/emotional/motivational learning (and identity formation) during adolescence in ways that promote healthy motivations (using an understanding of recent findings from trans-disciplinary developmental science)?	39	61	70	53	46	60	46	
	<b>Adolescent health: policy, health and social systems intervention: development/testing (mean)</b>	<b>68</b>	<b>82</b>	<b>80</b>	<b>74</b>	<b>64</b>	<b>76</b>	<b>63</b>	
	<b>Intervention: Implementation / Delivery</b>								
1	What platforms and strategies are most effective to reach and help the most vulnerable adolescents (eg. those not in school, slum dwellers and/or those in poor families)?	90	91	90	87	93	90	85	
2	How can primary health care services be designed to most effectively meet the unique health needs of adolescents?	84	93	91	82	82	88	80	
3	How can new technologies such as cell phones and the Internet be used effectively to provide information, referral and treatment for adolescents?	97	97	93	81	71	87	82	
4	What interventions can be used to facilitate continuity of care for mobile adolescent populations?	94	91	83	74	88	84	81	
5	What is the effectiveness of different models of provision of primary care by community health workers in settings that are accessible and acceptable to adolescents?	81	89	79	82	82	82	78	
6	How best can successful interventions in adolescents be scaled up?	80	86	86	80	71	82	72	
7	What are the major barriers that adolescents face in accessing health care?	96	87	77	77	89	82	80	
8	How should adolescent health services be reorganised to address multiple aspects of adolescent health simultaneously (including the biopsychosocial determinants of health), rather than using "siloeed" approaches to target one health issue at a time?	86	86	87	77	69	81	71	
9	What are the characteristics of health services that best address the special needs of adolescents (e.g. opening hours, affordable, integrated (one-stop), preserving confidentiality, etc.), in terms of attendance both for curative and for preventive/promotive services?	76	88	84	76	71	81	70	
10	How should adolescent-friendly health services best be implemented and support social systems for youths at risk?	68	84	82	76	78	81	66	
11	What are the most effective uses of social media to influence adolescent health behaviours?	90	89	89	73	61	80	70	
12	How best can adolescent decision-making and self-efficacy to make healthy lifestyle and life choices be promoted, particularly in low income and high stress contexts?	71	87	81	73	73	79	68	
13	What are the most effective ways that adolescent girls (10-14 years and 15-19 years) have been reached to receive health or other social interventions?	79	83	81	73	77	79	67	
14	What are the best ways to develop effective interventions to reduce gender inequality and improve adolescent girls' self-efficacy and educational attainment?	69	80	80	76	77	79	66	
15	How best can adolescents be attracted to attend health services?	84	84	83	70	71	78	71	
16	What are the lessons learned by countries that have implemented Adolescent Friendly Health Services?	88	85	81	72	70	78	70	
17	What is the effectiveness and feasibility of implementing interventions in different sectors that address several health outcomes (e.g. nutrition, family planning, STIs, injuries due to violence) among adolescents?	69	80	79	74	72	77	65	
18	What do health professionals perceive as barriers to working with young people?	93	81	76	74	71	76	70	
19	How best can health systems motivate adolescents to adopt healthy and culturally appropriate behaviours and habits, especially in LMICs?	69	81	76	76	63	75	61	
20	How can adolescents' transition from paediatric to adult services be improved?	86	77	79	69	64	73	65	
21	How can online interventions be used to improve health care integration and delivery (eg. Integrating patient-records across different health providers)?	87	84	82	60	57	73	64	
22	Do specific management and treatment protocols designed for adolescents and delivered in an adolescent health unit improve outcomes?	74	81	83	59	60	73	59	
23	How can we ensure that adolescents in LMICs are able to access evidence-based services across different health problems?	69	74	75	66	69	72	58	
24	How can schools be avenues for effective health promotion?	71	76	71	73	64	71	61	

25	What are the incentives that could be used to improve coordination between education and health sectors?	81	77	79	74	47	71	63
26	What are innovative ways of delivering academic/vocational skills for adolescents through collaboration between departments of education, social welfare and health?	79	77	73	66	61	70	61
27	What are the most effective approaches to improve the coordination and networking between communities, civil society organizations, policy makers and beneficiaries?	66	76	64	69	59	66	55
28	What national level policies promote equity and opportunity for adolescents to fulfil their potential?	71	77	61	61	67	66	60
29	What are the critical and complementary policy (social, economic, other system) strategies that support and strengthen the individual skills and family relationships necessary to improve adolescent health outcomes?	69	73	74	57	50	66	52
30	How best can programmes that target multiple levels (eg. individual, family, community) and use multiple approaches at the same time be evaluated?	74	80	63	61	56	65	55
31	How best can young adolescents be identified and screened for health-related assets?	57	74	60	51	57	61	47
	<b>Adolescent health: policy, health and social systems intervention: implementation/delivery (mean)</b>	<b>79</b>	<b>83</b>	<b>79</b>	<b>72</b>	<b>69</b>	<b>76</b>	<b>67</b>
	<b>Adolescent health: policy, health and social systems (mean)</b>	<b>75</b>	<b>82</b>	<b>77</b>	<b>71</b>	<b>69</b>	<b>75</b>	<b>65</b>
	<b>Overall average scores</b>	<b>78</b>	<b>82</b>	<b>78</b>	<b>72</b>	<b>70</b>	<b>76</b>	<b>68</b>