Iron deficiency anaemia is estimated to be the single largest cause globally of morbidity and mortality in adolescent girls; it is expressed as disability adjusted life years. Disadvantages linked to iron deficiency anaemia include reduced academic potential; decreased wellbeing and productivity at home or in the community; and increased maternal and infant morbidity and mortality for adolescents who become pregnant. The World Health Organization recommends weekly iron folic acid supplementation (WIFAS) to reduce anaemia in adolescents aged 10-19 years and women of reproductive age, in regions where anaemia is a public health concern, affecting >20% of females aged 15-49 years. In Indonesia, the national prevalence of anaemia among females aged 15-24 years is 18.4%; other surveys suggest a prevalence of 30% in adolescent girls. Screening data from junior high school students in West Java, the most populous province with 47 million inhabitants, indicated a prevalence of >50%.

Indonesia’s Ministry of Health updated its national programme for anaemia prevention and control in adolescent girls and women of reproductive age (WIFAS policy) in 2016 to align more closely with WHO guidance (box 1). As part of the revision, it was suggested that an existing school health programme, Usaha Kesehatan Sekolah/Madrasah (UKS/M), should deliver the service (box 2). In Indonesia, adolescents rarely access preventive health services, but over 86% are enrolled in secondary school. Thus school based interventions are seen as ideal to reach adolescent girls, and are cost effective in other settings. Although the WIFAS policy had been revised, it had not been implemented, and practical guidance from the Ministry of Health was limited. To overcome this challenge, the ministry received technical and financial support from an international non-governmental organisation—Nutrition International—to introduce a demonstration project for adolescent nutrition. This project worked through the school health programme to understand the roles, challenges, and opportunities inherent in this multisectoral approach, with the aim of designing a scalable programme.

This case study was developed in collaboration with the Partnership for Maternal, Newborn, and Child Health. It aimed to identify factors for successful multisectoral collaboration for women’s, children’s, and adolescents’ health. The methods used included document review and interviews with key informants to provide information for a working report, and a multistakeholder review of the findings of the working report (supplement 1).

Design of the demonstration project intervention

The adolescent nutrition WIFAS demonstration project was conducted between 2015 and 2018. It aimed to show how the revised national WIFAS policy could be introduced through the UKS/M school health programme, supported by four ministries: Ministry of Health, Ministry of Education and Culture, Ministry of Religious Affairs, and Ministry of Home Affairs (box 3). The Ministry of Health selected the peri-urban and rural districts of Cimahi and Purwakarta, respectively, in West Java (fig 1), as implementation sites. The districts reported high rates of anaemia (>50%) and had also shown leadership in championing adolescent nutrition.

The demonstration project involved three key strategic components based on broader adolescent nutrition programme work by Nutrition International. This includes both WIFAS and nutrition education for adolescents; see also, project timeline (supplement 2).

(1) Increasing awareness of, and securing government commitment to, the WIFAS project and adolescent health, in general. This to be achieved through implementation of policies, ensuring budget allocation for procurement and supply of IFA supplements, training, supportive supervision, and providing resources through joint advocacy meetings at national, provincial, and district levels.

(2) Improvement of the supply of commodities through skills building of Ministry of Health staff in forecasting, procuring, and supplying IFA for district health offices, and by strengthening supply chain management systems. Programme work also included provision of joint support for early feedback on IFA delivery.

Marion Roche and colleagues highlight lessons from a multisectoral project implementing weekly iron supplementation for adolescent girls in West Java, Indonesia, which provides a scalable model for reducing anaemia.
Box 1: Evolution of weekly iron folic acid supplementation (WIFAS) policies in Indonesia

- Since 1997, the government of Indonesia has had a mandate to introduce iron folic acid supplementation for adolescent girls, in order to reduce future maternal health complications. The original 1997 guideline recommended one supplement, once weekly for 16 weeks, and an additional supplement every day for 10 days of menstruation each month. 
- This guidance was not aligned with the updated 2011 WHO guidelines for iron folic acid supplementation. These guidelines recommend one supplement weekly for 3 months and then 3 months without supplements (6 months total/year), or the option to implement the programme once weekly during the school semester, as aligned with the school calendar.
- In 2015, academics and nutritional experts, including Nutrition International, participated in technical consultations led by the Ministry of Health, to align national guidelines with the WHO recommendations. The revised Indonesian guideline recommends WIFAS of 60 mg elemental iron + 400 µg folic acid, once weekly for every week of the year. The formula recommended by WHO (60 mg elemental iron + 2800 µg folic acid) was not affordable globally.

The behaviour change intervention strategy aimed to show that WIFAS and anaemia reduction would improve school performance and wellbeing of adolescent girls, rather than linking it to reproductive health (supplement 3).

Findings from the demonstration project could help to scale up the policy beyond these two districts. We estimate that the demonstration project might have contributed to preventing 4071 cases of anaemia, by reaching 52 000 adolescent girls with the WIFAS scheme in the two districts. These figures are based on estimates from Nutrition International’s Outcome Modelling for Nutrition Impact Tool; modelling based on the national prevalence of anaemia for women of reproductive age; and 27% cases of anaemia averted by WIFAS. Details of additional achievements provided by the endline evaluation measurements are shown in supplement 4. Below, we examine the different components of collaboration that contributed to this success.

Box 2: Usaha Kesehatan Sekolah/Madrasah (UKS/M): national school health programme

The UKS/M programme, established in 1976, aims to improve students’ educational achievement by encouraging a healthy lifestyle and creating a healthy environment for students. 

The programme was updated in 1984, and endorsed by a joint regulation of four ministries: the Ministry of Education and Culture, Ministry of Health, Ministry of Religious Affairs, and Ministry of Home Affairs. Each sector has its own role and responsibilities for supporting UKS/M activities. These guidelines were updated in 2014. They provided a comprehensive list of activities for schools to adopt those most needed.

The programme promotes intersectoral collaboration for school health among ministries with national, provincial, district, and subdistrict coordination teams. In schools, the head teacher and one or more teachers oversee UKS/M actions. Each school is expected to work with primary health facility (puskesmas) staff to carry out certain programme activities. In 2016 the national Ministry of Health requested that weekly iron folic acid supplementation should be one of the UKS/M activities.
This proved to be a key challenge with using UKS/M to deliver WIFAS, and collaboration with schools needed to be strengthened. District coordinators, supported by Nutrition International, were crucial for revitalising the UKS/M programme and involving each sector, through extensive communication (box 3). Project stakeholders emphasised that this initial investment in the coordinators was essential for bringing together the relevant personnel across the multiple ministries.

Defined roles and responsibilities were described in the UKS/M. However, challenges emerged from the different structures in management, communication, and reporting between health and education sectors. This was due to different levels and timing of decentralisation across sectors, and to changes of structures in the education system during the project (supplement 5). The demonstration project worked with 244 schools that were accustomed to reporting to the provincial office. On the other hand, health services, including nutrition, were coordinated by, and reported to, their respective district/municipal health office. The project moved the expected lines of reporting, and the network of health facilities and district health offices now coordinated with schools. Secondary school management was moved to the provincial level in 2017 soon after the WIFAS project was implemented. This resulted in changes in leadership for the demonstration project in the education sector.

Although misalignment between the health and education system reporting lines was a challenge, decentralisation also had the benefit of fostering innovation by local champions. Under the decentralised system, primary and secondary schools have autonomy to prioritise which UKS/M activities to implement in their schools and school principals played a vital role in leadership of WIFAS activities. The district coordinators built relationships with school principals to create and maintain their interest in the project.

Building capacity and relationships
Joint capacity building succeeded in its original goals, but also had the unintended benefit of fostering relationships and communication. This proved invaluable for the collaboration. Project stakeholders across sectors agreed that the four day “training of trainers” course for district facilitators was the key entry point to collaboration.

The main lesson from workshops was that building relationships and trust among stakeholders was essential for improving collaboration. Such working relationships and communication across sectors were previously absent. Improving personal relationships was recognised by all as one of the main benefits of involvement in the project, in addition to improving knowledge of health and nutrition and identifying goals for the collaboration. Most informants used the term “silaturahmi” or “extending ties of friendships, fellowships, or fraternity” to describe their personal gain from the project (box 4). It was suggested that formal joint training and meetings should be followed up by informal networking, to improve collaboration and build trust across sectors. This was especially important at the district level, and revived the UKS/M programme in both districts, after a period of limited activities.

However, one challenge to sustaining relationships was to reduce the turnover of staff, especially in schools, as it was teachers who delivered the IFA tablets and
Making Multisectoral Collaboration Work

Education to adolescent girls. Teachers could be easily transferred to other regions by the district or provincial education and religious affairs office. To reduce this problem the district health offices and Nutrition International conducted on the job training of teachers in schools, providing support and supervision. Some schools also used the WIFAS training manual to provide pretraining information for newly appointed teachers. Involving adolescent girls, such as those in junior Red Cross/Red Crescent groups, in distribution and reporting of WIFAS take up also helped the teachers.

Strengthening supply chain management and monitoring systems to mobilise resources. Providing local data to show the need for, and potential of, the project was necessary for the engagement of participants. School enrolment data from the education office were essential for estimating commodity procurement by the district health offices. After initial resistance, data sharing became smoother when relationships were built:

“At the very beginning it was very difficult even to get a database of students to estimate the IFA stock for West Java… Now our head (provincial health office) is able to contact by phone her good friend at the provincial education office to get the data.”

Key informant interview, provincial health officer (May, 2018)

District budget constraints were also cited as a challenge to implementing the UKS/M programme. Little information about UKS/M financing at the various administrative levels is available; and without a monitoring and evaluation system, data are limited on the impact of the programme’s activities. Participants outside the health sector considered that monitoring and evaluation should be carried out by the health sector. However, there was no mechanism for schools to share data about WIFAS activities before the demonstration project. The district coordinators helped to support harmonisation and reporting across systems and sectors and shared health data with all sectors involved. This helped to build interest in the progress being made, and accountability for implementation across sectors.

Use of evidence and local data involved participants and drove the decisions made.
Box 4: The concept of silat nourshmi and the importance of extending personal relations for collaboration

The Islamic-Indonesian term and concept of silaturahmi is very important in Indonesia for building personal relationships. It is based on the Islamic value of goodwill and fellowship, and the ability to extend personal ties of friendships to strengthen fraternity and mutual solidarity. To have a wide network of contacts is thought to provide many personal benefits. Thus, it is an important aspect of building relationships, contributing to successful collaboration across sectors for the WIFAS programme. This was expressed by one district stakeholder:

“Previously before the training of trainers we hardly knew each other, although we were all working under the district government. We very rarely had coordination meetings with other sectors, but after the training of trainers, we have been getting along very well...it extends silaturahmi.” Key informant interview, district religious affairs officer (May, 2018)

Path to sustainability

Although it is too early to confirm the sustainability of the project in the demonstration districts, some promising signs have been seen. These include establishment of the WIFAS project within UKS/M, revitalisation of the UKS/M, support from policymakers, and emergence of champions at every level. For example, project stakeholders at the district level have agreed to jointly pursue school operations grants and also funding from the universal health insurance programme. In Cimahi district, the collaboration has also expanded to include the district development planning agency (Bappeda), in support of implementation and to extend potential financial investments beyond the health sector.

Data from the project can stimulate interest, but it is still necessary to strengthen the internal monitoring system of the UKS/M programme, which currently depends on external support. Project participants were keen to improve coordination across sectors using mobile communication channels and to increase the quality of monitoring and evaluation. In Cimahi, the district health office and UKS/M are holding regular meetings on monitoring as a way to improve data quality and use. This is still in an early stage.

Importantly, scaling up of the WIFAS project is underway, based on the lessons learnt from the demonstration project. Expansion of external resources is taking place, with interest from both Canadian and Australian governments; while increasing financial commitments from district governments are being made. This case study shows that targeted investments in multisectoral collaboration will be critical for success.

The next steps should also focus on the 14% of adolescent girls who do not attend school in Indonesia, with gender inequalities, social norms, early marriage, and early childbearing making them all the more vulnerable to anaemia. Overcoming the limitations of this project to reach many of the vulnerable girls would be of interest to many district sectors. Given the many consequences of anaemia and gender inequality, concerted efforts for anaemia reduction are necessary to achieve the sustainable development goals.

Conclusions

This study of the WIFAS demonstration project in Indonesia highlights several key elements for successful collaboration: political commitment, enabling policy, shared goals, joint training and advocacy,
building relationships and informal communication, and sharing data. The success in reaching adolescent girls in school and the estimated anaemia reduction, are greater than possible by any sector working alone. This article, describing the perspectives and experiences of multiple stakeholders, has illustrated challenges and opportunities that should inform scale up in Indonesia. It provides helpful insights for other countries aiming to reduce anaemia and improve nutrition for adolescent girls.

Multisector collaborations require resources and coordination. To further reach adolescents, it will be critical to build such collaborations that respond to the unique needs of countries. The authors thank the many people who supported the preparation of this article, especially during the development of the case study working paper. At the national level, these include representatives from the Ministry of Health, Ministry of Education and Culture, Ministry of Religious Affairs, Ministry of Home Affairs, and the UKS/M secretariat, who thank for their invaluable advice and direction for the WIFAS project and implementation, and support for developing the case study. We also are grateful to Elvina Kanyadi in her former role as country director who worked with the Ministry of Health to establish and provide strategic leadership for the demonstration project. At the provincial level, we are grateful for the support of many people from the province health office, province education office, province religious office, province secretariat, and the UKS/M secretariat of West Java Province; and also the key staff from the district health office, district education office, district religion office, and district secretariat of Cimahi and Purwakarta districts for their valued cooperation during implementation of the demonstration project in those districts (2015-2018) and for providing information for the case study. For support during fieldwork the authors would like to thank staff from the Jatiluhur health facility (puskesmas) and staff and adolescent girls from Jatiluhur high school SMP1 in Purwakarta district, who willingly shared their experiences of the demonstration project. We also appreciate all the organisations that attended the case study multistakeholder dialogue workshop on 4 July 2018, and the research team led by Dr Doddy Izwardy, Agus Doddy Iswanto, Doddy Irawanto, Ismail Doddy, and Agus Doddy Irawan.

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Contributors and sources: MLR and LB conceived the outline of this paper, MLR drafted the first version, and revised it in consultation with LB. All authors reviewed and provided comments on the final draft. For the case study review supporting the findings of this article, INY wrote the draft working paper with inputs and final review from other authors; INY undertook key informant interviews; and LB drafted an initial summary of findings used for consultation with stakeholders. TSP and EKA provided technical supervision and support to the demonstration project, implementation and assessments, and the case study multistakeholder meeting. For the project and case study, SK provided overall strategic guidance and AB technical guidance. DI provided advice and direction. All authors contributed intellectual content and approved the final version of this article for submission. MLR is the guarantor for this article.

Competing interests: We have read and understood BMJ policy on declaration of interests and declare the following interests: funding from the Partnership for Maternal, Newborn, and Child Health (PMNCH) secretariat (LB) and Nutrition International (INY) for consultancy fees and related costs for undertaking the case study; employees of Nutrition International for implementing the project that is the focus of this case study (EKA, TSP, SK); and attendance at the forthcoming PMNCH partners’ forum in December 2018 (MLR, LB, EKA, TSP, SK, DI, AB). The views expressed in this article are the authors and do not necessarily represent the views, decisions, or policies of the institutions with which the authors are affiliated.

Provenance and peer review: Commissioned, externally peer reviewed.

This article is part of a series proposed by the WHO Partnership for Maternal, Newborn and Child Health (WHO PMNCH) and commissioned by The BMJ which peer reviewed, edited, and made the decision to publish the article. Open access fees for the series are funded by WHO PMNCH.

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Supplement 1: Methods for the WIFAS project case study
Supplement 2: The project timeline
Supplement 3: Behaviour change intervention strategy and campaign
Supplement 4: Endline achievements
Supplement 5: Decentralisation in the health and education sectors

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Cite this as: BMJ 2018;363:k4541
http://dx.doi.org/10.1136/bmj.k4541
the bmj