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Warwickshire Fire and Rescue Service – Warwickshire Heart Shield

Context – why was the project set up?

Warwickshire is a landlocked county in the West Midlands region. It is a mixture of rural and urban landscapes. The county town is Warwick in the south but the largest town is Nuneaton located in the north. The total population was 554,002 in 2016. The county is a two-tier authority. The health of people in Warwickshire is varied compared with the England average. Warwickshire is one of the 20% least deprived counties/unitary authorities in England, however about 14% (13,500) of children live in low income families. Life expectancy for both men and women is higher than the England average, however life expectancy is 6.6 years lower for men and 5.9 years lower for women in the most deprived areas of Warwickshire than in the least deprived areas. A number of health inequalities exist within the county that require interventions to ensure health and wellbeing needs are met. Over the period 2014-2039 the population in Warwickshire is expected to increase by around 66,900 (12.1%). Although this is slower than the England rate, by 2039 more than 1 in 4 of the Warwickshire population is expected to be aged over 65, and around 1 in 16 aged over 85. The 85+ increase is 20% above the England increase rate for this age group. While it is good that Warwickshire residents are living longer, data shows that much of this additional time is spent in poor health (12 years for men, 16 for women). Years spent in poor health impact on families and workplaces and increase pressure on health and social care services.

Aims

In March 2016 Public Health Warwickshire commissioned Warwickshire Fire & Rescue Service to deliver a pilot project in the North of the county. Figures from the Mortality Database from 2011-13 demonstrated mortality rates for Cardiovascular Disease (CVD) for the North Warwickshire Borough that were higher than the England average at a rate of 95.8 per 100,000. Additionally 5 of the 9 wards where premature mortality from CVD was significantly higher overall than the Warwickshire rate, were within the North Warwickshire locality. This, alongside low national rates of bystander CPR (currently only 30% in the UK), prompted Public Health to commission the Warwickshire Heart Shield project to help change this.

The project needed to enable secondary school children to learn:

1. How to keep their heart healthy.
2. How to do basic Cardiopulmonary Resuscitation (CPR).
3. What an Automatic External Defibrillator (AED or Defib) does and how to use it.
4. How to put an unconscious casualty in the recovery position.

The long term aims of the initiative were to:

1. Help people increase quality of life and decrease premature mortality from cardiovascular disease.
2. Increase levels of bystander CPR.
3. Reduce health inequalities across Warwickshire.
4. Increase survival rates from out of hospital cardiac arrests.

Solution

In March 2016 WFRS were approached by WCC Public Health department to deliver a 6 month pilot project to create and implement an initiative in Warwickshire secondary schools that would provide a solution to the aims above.

Once Public Health had commissioned WFRS a 15 hour Project Manager was seconded from WFRS Community Prevention Team to run all elements of the project and its delivery. All project documentation was written and submitted to WFRS Transformation Programme board and the director of Warwickshire County Council Public Health department for approval and regular updates. The first task was to gain best practice information from a Creating a Generation of Lifesavers conference at the Royal College of Physicians in London. Several national and international schemes were showcased there. After comparing these schemes we decided to base our delivery content on a successful initiative in Leicestershire called Heartsafe. We added pro-active heart health education to our sessions and gained valuable advice about what other initiatives would have done differently if they could. We implemented these lessons learnt into our final product: Warwickshire Heart Shield.

To create the delivery template the Project Manager used the expertise of a WFRS Training Manager on a voluntary basis. Many hours were freely given to the project in this way and were a large part of the reason that the initial pilot came in on budget, with all initial aims successfully achieved. Once the initial lesson plan was drafted all schools in the pilot area were contacted and asked to take part in the initiative. One school came forward and we consulted with staff and pupils on the content we were proposing to deliver. They were really pleased with what we were offering and we trailed the first lessons in year groups 8 & 9. We had taken advice from the scheme in Leicestershire - they delivered to year 10, but would have changed the year group in hindsight. The trails showed that

the most receptive audience was year 8 so that became our target group. All involved were impressed with our comprehensive approach:

We had made sure that:

- The lesson fitted into an hour, was aligned to PSHE objectives and included a full evaluation completed by each participant.
- All evaluations could be sent to the school in report form which showed the learning that the pupils had achieved.
- Schools received their free British Heart Foundation Call Push Rescue kits.

Delivery of each lesson ideally involves 7 Heart Shield staff. Initially these were made up of the operational staff who had expressed an interest in being involved in the project. They were paid at their normal hourly rate plus one additional hour for travel. The training of these staff and all the initial sessions in schools was delivered by the WFRS Training and Development Manager on a completely voluntary basis.

We were also able to use Jaguar Land Rover Fire Service personnel as volunteers to help with the delivery of the project. This worked really well as some work for both WFRS and JLR as Firefighters. JLR were keen for us to utilize their staff for Heart Shield as part of their corporate responsibility programme volunteering scheme.

With the 6 month pilot being so successful more schools wanted to become involved. Public Health agreed to fund another 6 months and wanted us to offer the scheme in all secondary schools in Warwickshire. We did this and used specific CVD data maps and school locations to name our key target schools. A full evaluation of the first year of the project was submitted to WFRS DCFO and the Director of WCC Public Health. Both were keen to continue Heart Shield and agreed to fund 2017/18 and 2018/19 on a 50/50 basis.

In 2017 due to the success of Heart Shield and a road safety initiative called Fatal Four, funding was granted from WCC to employ 5 Community Support Officers in the Community Prevention Team. These officers would form the core delivery team for Heart Shield.

For Public Health working with WFRS was key to the success of the project. Heart Shield was able to build on the successful proactive approach the fire sector has had in reducing accidental dwelling fires and subsequent injuries, and apply them in a Public Health context. Using our already established relationships with schools through the fire safety schools programme, we were able to secure a route into the target audience.

Key Achievements:

- From project initiation to delivery in 6 months.
- Warwickshire Heart Shield has been peer reviewed by Staffordshire Fire & Rescue Service and it has been identified as good practice which could be adopted nationally.
- Over 60 WFRS staff and 10 JLR volunteers trainers have been trained to deliver Heart Shield.
- Partnership work with JLR has secured 10 volunteer trainers for 2018 to help reduce delivery costs.
- Customer Service Excellence (CSE) Standard - the Council was subject to a Recertification Assessment and Heart Shield was highlighted as one of the areas the Assessor scored as "Compliance Plus".
- Both Notts FRS and Essex FRS have already viewed the programme with Notts adopting Heart Shield as part of their schools programme and Essex wanting to set up a similar model.
- Referrals to WFRS Training Services have increased with some schools requesting First Aid courses.

Outcomes – what are the benefits and how were they / will they be measured? (in particular financial benefits, impact data and return on investment)

Project Outcomes

The success measures for the initiative are to be able to demonstrate the following outcomes through evaluation evidence:

Pilot Outcomes

1. Young people across the Warwickshire North locality are able to appropriately respond to health emergencies, including use of CPR.
2. Young People across the Warwickshire North locality understand the positive lifestyle choices that they can make to look after their heart health, and commit to action.
3. Schools in the Warwickshire North locality are positive about the initiative, and its links to the school curriculum, and commit to an annual programme.
4. Partner agencies and organisations are positive about their experience of being involved in the initiative, and wish to continue involvement where possible.
5. We have delivered a project that is safe, effective, high quality and achieves positive experiences from participants.
6. Young People/Parents/Carers and or staff in schools express an interest in becoming first/emergency response volunteers leading to stronger and more resilient communities.

Longer Term Outcomes:

1. The programme continues after the pilots trial, and is rolled out across Warwickshire, ensuring that every child attending a Warwickshire secondary school receives this initiative.
2. A long term investment in the population is achieved, leading to a more resilient and trained population
3. It contributes to improvements in Public Health and NHS heart health indicators, and reduced health inequalities in Warwickshire.
4. Increase levels of bystander CPR.
5. Reduce costs to NHS.
6. Diversify the role of WFRS in the community
7. Create a strong working partnership to enable WFRS to deliver key Public Health messages

What we have achieved:

Warwickshire Heart Shield when measured against the initial project objectives, outcomes and longer term outcomes has:

- Achieved 75%
- On target to achieve 20%
- Not yet achieved/Data to fully evaluate not yet available 5%

Of the schools that have received Heart Shield, 100% have confirmed they would like yearly revisits as part of their PSHE programme. Uptake of Heart Shield has increased 17 fold over the three academic years since its inception: from one to now 17 schools.

To date we have delivered Heart Shield to over 4000 pupils in 15 secondary schools. During the 2017/18 school year we have 17 schools currently scheduled for delivery. There are 36 secondary and 9 special secondary schools in Warwickshire. We are delivering Heart Shield sessions in:

- 47% of mainstream Warwickshire secondary schools.
- 22% of special secondary schools.
- 45% of North Warwickshire schools.

In addition to the figures above, our Community Support Officers have been attending community events where they have given over 400 adults hands on CPR awareness training.

Local and National Policies:

The Heart Shield initiative also supports many local and national joint working policies and initiatives such as:

- The Resuscitation Council's national campaign on "Restart a Heart Day" in line with directives from The Chief Fire Officers Association (now NFCC) and The Association of Ambulance Chief Executives.
- Warwickshire Joint Strategic Needs Strategy (WCC)
- NHS, and Public Health Outcome Frameworks 2016/7/8
- The Consensus Statement on Saving Lives and Improving Health and Wellbeing between the Association of Ambulance Chief Executives (AACE) and the Chief Fire Officers Association (CFOA – now NFCC)
- Health Strategy 2015 - 19: Fire & Rescue as a Health Asset (CFOA)
- FireWorks : A Collaborative Way Forward for the Fire & Rescue Service (New Local Government Network)
- Beyond Fighting Fires: The Role of the Fire and Rescue Service in Improving the Public's Health (Local Government Association)
- Public Health Document November 2016: Evaluation of the impact of Fire and Rescue Service interventions in reducing the risk of harm to vulnerable groups of people from winter-related illnesses

To record the learning achieved during the Heart Shield sessions, an evaluation is completed by all students who participate. All data from these is input into a google form. We are then able to send summary reports which show pupil learning regarding Heart Health, CPR and AED awareness to each school. (Example of Evaluation forms and a summary report are available). This data is also used in annual reviews and termly updates for all key stakeholders (also available on request). Individual quotations are also recorded on the form and suggestions for improvements have been used to inform changes to the lesson we deliver (Evaluation Quotations examples are available). Full projected costings can be found in the Heart Shield Interim Review, but in summary, it costs £9.77 per pupil.

It is interesting to note that the British Heart Foundation (BHF) Cardiovascular Disease (CVD) 2014 Statistics state: "CVD costs the NHS £129.91 per head of population in the West Midlands Region". Whilst there is no direct correlation between Heart Shield pupil costs and the cost of CVD per person in our region, it is an important statistic to consider. Ultimately Heart Shield achieves 2 key outcomes: improved recovery outcomes of individuals who receive emergency CPR; and improved outcomes by lifestyle changes implemented by students.

Lessons learned – what challenges or difficulties have you faced or do you expect to face?

Research best practice elsewhere before you start. Making use of advice from other similar projects means you can deliver the best solution to any issues: learning lessons from others helps to avoid problems.

Make sure that the evidence of need is aligned to the aims and objectives of the project. This will support longevity and help with funding. Consider the staffing and payment requirements. Off duty firefighters supported by volunteers from Jaguar Land Rover have been used for Heart Shield. After 18 months of the project the Community Prevention Team employed extra Community Support Officers to support the work and this really helped with planning of the sessions as staffing with off duty personnel was very difficult. When setting up a similar initiative, consideration should be given to make sure a service vehicle is always available for the transportation of equipment needed to deliver the sessions.

Ensure that sufficient staff are allocated to the initial setup of the project - we had one 15 hour Project Manager which only worked due to working over and above contractual arrangements and obtaining support from other key roles such as the Service Training Manager.

What comes next?

With an ever decreasing public purse both WFRS and WCC Public Health would like to see Heart Shield become self-funding. We do not want to charge schools for Heart Shield therefore we are approaching companies with a view to them using some of their Corporate Social Responsibility funds to “sponsor” the initiative. This is not something that WCC has really been involved in before and so a full evaluation of our efforts will be crucial.

We have also developed versions of Heart Shield that can be used in community settings or at public events. This will further improve bystander CPR rates and encourage members of the public to use AED's.

In addition, we will:

- Expand our collaboration arrangements with Jaguar Land Rover for continued use of their volunteers to support Heart Shield delivery.
- Explore collaborative working with West Midlands Fire Service and Public Health representatives to facilitate future roll out of Heart Shield across West Midland Region.
- Continue to recruit target schools in Warwickshire.
- Explore alternative delivery methods such as Virtual Reality (VR) technology.