Stroke delivery plan 2012-2016

Listed below are the outcomes hoped to be achieved through the actions in the above delivery plan. Please answer the questions for each action.

Action	Has this action been completed y/n?	What has the HB done to support/achieve this action?	What was the impact of this action being completed/not completed?	How was this measured?	Additional comments
Preventing stroke					
Engage effectively through collaboratives to ensure appropriate local population outcomes are identified within Single that the actions of all partners to achieving these outcomes are clearly set out, monitored and measured. Work with the Welsh Government, local government, Public Health Wales, GPs and community pharmacies, the Third Sector and others to identify, implement and audit local strategies, clearly stated population outcomes and performance measures and targets to prevent stroke. In particular, to: o promote better public awareness of stroke risk factors and the importance of recognising and presenting symptoms promptly; o work through their locality networks to plan and deliver a more systematic and coordinated approach to identifying those at risk of vascular disease and atrial fibrillation and managing that risk effectively; o reduce smoking, obesity and excess alcohol intake; o implement all elements of the All Wales Obesity Pathway; o encourage healthy schools and workplace environments to take action to reduce smoking, obesity and harmful alcoholic consumption.					
Detecting stroke quickly Local health boards will: • together with their partners, raise public awareness of the symptoms of stroke and the importance of accessing medical care promptly, such as by using the FAST test; • ensure that primary and secondary care and the public treat stroke as a medical emergency; • work with GPs to raise their awareness of symptoms; • ensure through audit that services are in line with national guidance and agreed referral protocols and pathways; • ensure seven day access to fully functional services for stroke and transient ischaemic attack; • Audit the pathway for people diagnosed with a stroke and act on findings to improve services for early detection.					
Delivering fast and effective care Local health boards will: • review, plan and deliver evidence-based and timely treatment, in line with latest evidence, standards and guidance; • identify mechanism to plan and deliver equitable access to new diagnostic procedures, technologies, treatment and techniques in line with latest evidence and guidance; • provide timely access 24/7 to thrombolysis where appropriate, with telemedicine support where required; • deliver tertiary services at appropriate sites to include interventional neuroradiology and neurosurgery; • provide access to vascular surgery for carotid intervention within timescales set out in national guidelines; • undertake complex surgery in line with peri-operative care standards as in the ERAS programme; • provide a robust in-hospital early rehabilitation service including psychological support in line with national standards; • provide access to a robust community early rehabilitation service with psychological support in line with national standards; • participate in and act on the outcome of national clinical audits and peer review and reflect action/learning to be taken in local stroke delivery plans; provide sufficient capacity, workforce, infrastructure and equipment to treat and care for people					
Supporting life after stroke					

Action	Has this action been completed y/n?	What has the HB done to support/achieve this action?	What was the impact of this action being completed/not completed?	How was this measured?	Additional comments
· Ensure discharge arrangements are planned through multi professional locality networking and include close communication and co-ordination with the • plan and deliver integrated health and social care services to meet the on-going needs of people who have had a stroke as locally as possible to help them return to health and independence; • implement the Self Care programme of work once developed; • develop appropriate care plans to agree care and support based on the needs of individuals following a diagnosis of stroke; • ensure regular review of stroke survivors with residual impairment and implement joint care plans; • ensure stroke survivors are screened for visual impairment and psychological needs; • involve stroke patients and their carers in the development of future services including creative ways of supporting them, listening to what they have to say about decisions that affect them and to provide accessible and meaningful information and training when they need it; • plan and deliver palliative and end of life care services as locally as possible to meet the needs of people who have had a stroke, where appropriate. **Improving information** • work with stroke survivors, their carers and the Third Sector to ensure effective signposting to sources of information and support; • assess, record and meet the information needs of people through the use of joint care plans; • publish regular and easy to understand information about the effectiveness of their local stroke services. • record and use clinical information in planning and service provision • monitor performance against stroke clinical indicators and use the results to inform and improve service planning and delivery; • survey the views of people who have had a stroke and their carers with respect to their experience and outcome of treatment • act on the findings of service user experiences Public Health Wales NHS Trust to provide Local Health Boards with support to meet the information needs of people affected by stroke **Targeting research** Foster a strong culture of research. In particular to: • offer all appropriate patients access to relevant clinical trials ; • maximise the use of Welsh Government funding for NHS research; • provide effective and efficient research governance processes to enable a speedy start-up and delivery of clinical trials • support and encourage protected research time for clinically-active staff; • build on, and extend, academic training schemes to develop a highly skilled workforce; • promote collaboration with key stroke research initiatives and facilities such as OPAN Cymru RRG, Haemostasis Biomedical Research Unit and All Wales Rehabilitation Research Network; • collaborate effectively with other Local Health Boards and NHS Trusts, universities and industry in Wales to enable a speedier application of research and introduction of new technology into the NHS.					

Strategic Key Actions

Key Action	By Whom	By When	Achieved?
Revise the remit of the all Wales Stroke Delivery Group to provide strategic leadership and work at an all Wales level to support Local Health Boards' service improvements.	Welsh Government	Dec-12	yes
Provide strategic leadership and work at an all Wales level to support Local Health Boards' service improvements. In particular, beginning with work on: • a set of Stroke Outcome Indicators and Performance Measures • developing a stroke care pathway	Stroke Delivery Group members working with the Stroke NSAG	Ongoing from December 2012 Feb-13 Jun-13	
Review current stroke services against the expectations set out for 2016 and use the outcome to inform an updated local delivery plan to reflect activity under each of the themes for action. Report formal progress against the delivery plans and NHS Performance Measures to Health Boards and Welsh Government. Report progress against local delivery plan milestones via own website. Review and update delivery plans and milestones.	Local Health Boards working in partnership with other Local Health Boards, NHS Trusts, Local Government and Third Sector	Mar-13 Annually, starting Sep-13 Quarterly, starting with quarter ending Jun-13 At least annually	
Publish annual All Wales report on effectiveness of NHS stroke services in Wales, based on Local Health Board reports against Performance Measures.	Welsh Government	Nov-13	yes until 2018

Outcome indicators

Stroke Incidence rates

Stroke mortality rates (Cerebrovascular)

Reported modified Rankin scale at discharge

Preventing and detecting stroke

Evidence of a robust system to improve compliance with all Wales TIA and AF bundles, including:

% of population with cardiovascular risk conditions managed appropriately

% of atrial fibrillation (AF) patients managed appropriately

Percentage of patients with atrial fibrillation in whom stroke risk has been assessed in the preceding 3 years

	2014-15*	2015-16	2016-17	2017-18
ABMU	99.0%	98.1%	96.5%	92.1%
Aneurin Bevan	98.4%	96.1%	94.9%	89.8%
Betsi Cadwaladr	97.5%	97.4%	95.5%	91.2%
Cardiff & Vale	99.1%	98.6%	97.2%	93.5%
Cwm Taf	99.4%	95.9%	97.0%	94.4%
Hywel Dda	99.0%	98.6%	97.3%	91.6%
Powys	98.3%	97.5%	97.2%	93.6%
Wales	**98.6%**	**97.5%**	**96.3%**	**91.8%**

Percentage of patients with atrial fibrillation with anticoagulation drug therapy

	2013-14**	2014-15**	2015-16	2016-17	2017-18
ABMU	80.7%	83.0%	83.2%	84.4%	85.6%
Aneurin Bevan	83.6%	85.2%	84.0%	86.2%	86.8%
Betsi Cadwaladr	85.1%	86.5%	85.7%	86.8%	87.7%
Cardiff & Vale	82.7%	84.7%	84.0%	86.6%	86.7%
Cwm Taf	83.6%	86.5%	86.9%	88.0%	89.3%
Hywel Dda	85.1%	85.9%	88.2%	89.6%	89.7%
Powys	79.9%	88.3%	89.8%	89.4%	88.7%
Wales	**83.3%**	**85.4%**	**85.4%**	**86.9%**	**87.6%**

% of high risk TIA patients managed appropriately (medical assessment

Delivering fast effective care

Mortality within 30 days of admission

Mortality within 30 days of hospital admission for stroke

Source: PEDW

Notes: Data represents individual monthly periods. Stroke cases included where primary diagnosis = I61, I63 or I64

Month	ABMU	neurin Beva	etsi Cadwala	ardiff and Va	Cwm Taf	Hywel Dda	Wales
Sep-2010	12.3%	20.0%	23.5%	14.6%	26.1%	15.3%	18.1%
Oct-2010	16.9%	18.3%	15.7%	14.3%	22.0%	18.5%	17.3%
Nov-2010	16.5%	19.4%	10.5%	19.5%	18.8%	24.1%	17.0%
Dec-2010	20.5%	23.8%	23.9%	15.4%	27.3%	19.6%	21.8%
Jan-2011	20.3%	22.4%	18.9%	26.4%	29.4%	8.9%	20.6%
Feb-2011	17.6%	23.0%	14.3%	20.7%	13.5%	23.4%	18.3%
Mar-2011	12.8%	10.9%	22.6%	23.5%	20.9%	13.2%	17.1%
Apr-2011	19.8%	27.4%	18.5%	16.3%	20.5%	14.3%	19.5%
May-2011	17.1%	15.0%	15.1%	22.9%	17.0%	19.2%	16.9%
Jun-2011	15.3%	15.9%	16.5%	22.0%	38.6%	20.8%	19.1%
Jul-2011	15.3%	15.5%	21.1%	21.4%	15.4%	19.6%	18.1%
Aug-2011	22.2%	30.9%	18.3%	15.2%	14.3%	20.0%	20.5%
Sep-2011	21.8%	16.1%	15.7%	10.3%	28.9%	15.5%	17.7%
Oct-2011	17.6%	25.0%	15.7%	36.0%	22.4%	26.9%	21.9%
Nov-2011	15.5%	19.2%	20.0%	32.5%	17.1%	24.6%	20.4%
Dec-2011	21.7%	12.3%	19.5%	14.7%	18.0%	14.5%	17.3%
Jan-2012	25.0%	15.8%	19.8%	24.0%	20.0%	21.3%	20.7%
Feb-2012	18.7%	24.6%	26.0%	22.9%	25.0%	23.3%	22.8%
Mar-2012	20.4%	20.8%	13.3%	24.2%	21.8%	11.1%	17.6%
Apr-2012	21.3%	25.9%	20.2%	14.0%	11.4%	23.6%	20.4%

May-2012	19.8%	11.1%	13.0%	26.7%	17.4%	17.7%	16.4%
Jun-2012	17.5%	14.3%	19.2%	22.9%	20.9%	12.5%	17.2%
Jul-2012	10.6%	22.1%	11.6%	19.6%	18.0%	16.1%	15.1%
Aug-2012	25.0%	18.2%	17.8%	36.7%	10.2%	17.3%	19.2%
Sep-2012	18.8%	9.7%	23.8%	24.4%	26.3%	18.8%	20.1%
Oct-2012	17.6%	14.9%	16.7%	11.1%	9.8%	16.7%	14.7%
Nov-2012	11.0%	20.5%	18.9%	15.6%	31.4%	15.0%	17.3%
Dec-2012	15.6%	22.5%	15.5%	28.0%	26.8%	15.0%	19.5%
Jan-2013	20.0%	21.0%	23.7%	11.4%	29.1%	24.1%	21.7%
Feb-2013	17.5%	17.3%	20.8%	11.8%	15.1%	9.1%	15.3%
Mar-2013	16.7%	21.2%	19.2%	27.3%	23.1%	14.3%	20.1%
Apr-2013	14.6%	27.8%	16.3%	22.4%	18.6%	21.1%	19.0%
May-2013	15.7%	13.6%	16.2%	8.3%	13.5%	13.8%	13.9%
Jun-2013	17.9%	10.1%	16.0%	16.7%	20.5%	15.2%	15.7%
Jul-2013	14.0%	12.3%	6.4%	20.8%	16.7%	9.1%	12.5%
Aug-2013	11.4%	18.0%	13.5%	16.3%	18.0%	17.9%	15.4%
Sep-2013	13.9%	16.9%	18.3%	15.4%	14.6%	14.1%	16.1%
Oct-2013	18.8%	18.8%	24.7%	26.9%	15.2%	9.3%	19.3%
Nov-2013	21.1%	13.6%	11.3%	25.0%	12.8%	24.4%	16.9%
Dec-2013	20.2%	14.6%	24.5%	13.3%	13.3%	18.0%	17.9%
Jan-2014	21.2%	13.9%	18.7%	28.2%	26.1%	9.7%	18.1%
Feb-2014	16.9%	13.3%	16.8%	11.9%	5.3%	15.9%	14.6%
Mar-2014	18.6%	16.2%	20.7%	22.9%	31.7%	21.7%	20.5%
Apr-2014	18.6%	15.3%	20.8%	8.9%	22.0%	16.7%	17.2%
May-2014	10.1%	17.4%	20.2%	19.6%	16.3%	12.3%	15.5%
Jun-2014	18.8%	24.1%	17.5%	8.9%	5.4%	19.7%	16.3%
Jul-2014	15.4%	15.9%	13.1%	11.7%	20.0%	13.6%	14.7%
Aug-2014	14.3%	14.1%	14.3%	16.9%	17.0%	18.5%	15.4%
Sep-2014	9.1%	15.6%	23.2%	9.8%	13.3%	16.7%	14.9%
Oct-2014	13.8%	19.3%	19.2%	11.1%	19.0%	25.7%	18.0%
Nov-2014	11.1%	20.0%	18.2%	9.3%	7.1%	28.8%	17.0%
Dec-2014	15.2%	18.0%	23.9%	14.7%	18.0%	13.3%	17.2%
Jan-2015	12.5%	14.3%	20.7%	14.6%	15.0%	17.0%	15.3%
Feb-2015	20.2%	17.1%	14.3%	17.3%	18.4%	16.1%	16.9%
Mar-2015	17.9%	21.3%	17.5%	15.2%	17.9%	8.5%	16.7%
Apr-2015	16.1%	12.2%	17.9%	4.8%	25.9%	16.2%	15.8%
May-2015	30.1%	9.1%	15.8%	15.9%	23.8%	15.1%	17.6%
Jun-2015	14.5%	14.8%	9.4%	14.8%	13.7%	21.6%	14.6%
Jul-2015	17.1%	11.1%	14.5%	3.3%	14.3%	11.7%	12.3%
Aug-2015	8.7%	17.3%	14.0%	9.3%	18.6%	10.9%	13.3%
Sep-2015	20.5%	17.1%	8.4%	4.3%	10.0%	16.2%	13.4%
Oct-2015	10.3%	18.4%	16.0%	18.6%	12.8%	10.6%	14.6%
Nov-2015	13.3%	13.6%	14.3%	14.3%	16.7%	15.3%	14.1%
Dec-2015	13.3%	14.3%	19.6%	17.0%	14.7%	17.4%	16.4%
Jan-2016	17.1%	14.3%	19.1%	18.4%	19.4%	10.8%	16.4%
Feb-2016	15.1%	18.4%	19.3%	18.8%	15.2%	14.8%	16.9%
Mar-2016	13.6%	14.5%	14.3%	15.4%	24.1%	18.8%	16.2%
Apr-2016	12.5%	25.4%	20.0%	10.0%	20.0%	15.5%	17.0%
May-2016	11.8%	10.0%	20.0%	9.8%	12.9%	12.1%	13.4%
Jun-2016	20.0%	9.2%	17.8%	8.5%	11.1%	6.0%	12.7%
Jul-2016	12.8%	13.8%	10.1%	14.3%	25.0%	12.2%	13.2%
Aug-2016	5.8%	15.8%	16.8%	14.7%	15.5%	14.3%	13.8%
Sep-2016	11.0%	11.9%	16.1%	11.8%	13.2%	5.1%	11.6%
Oct-2016	15.1%	20.3%	15.6%	13.3%	10.6%	17.7%	15.7%
Nov-2016	10.6%	15.1%	16.5%	23.9%	7.3%	10.1%	13.4%
Dec-2016	15.7%	19.6%	15.1%	22.8%	12.5%	8.6%	15.4%
Jan-2017	16.5%	15.8%	21.5%	12.3%	9.4%	10.3%	15.2%
Feb-2017	17.1%	17.7%	19.4%	12.2%	11.4%	16.1%	16.1%
Mar-2017	10.9%	18.7%	8.0%	18.5%	14.5%	16.4%	13.9%
Apr-2017	12.6%	13.6%	19.2%	12.0%	18.8%	15.2%	15.1%
May-2017	11.0%	13.8%	15.8%	22.6%	13.7%	6.2%	13.4%
Jun-2017	10.8%	20.3%	13.9%	10.9%	8.5%	19.7%	13.8%
Jul-2017	14.3%	11.8%	12.5%	2.3%	12.7%	16.4%	12.1%

Aug-2017	9.7%	10.9%	13.6%	17.2%	7.1%	14.3%	12.1%
Sep-2017	12.0%	11.3%	9.1%	15.0%	16.7%	10.8%	11.7%
Oct-2017	11.3%	16.7%	21.9%	26.9%	12.8%	12.1%	16.6%
Nov-2017	10.5%	15.7%	21.2%	9.1%	13.2%	13.3%	13.9%
Dec-2017	10.7%	20.3%	20.0%	27.8%	15.4%	25.0%	19.6%
Jan-2018	13.8%	8.1%	15.4%	23.6%	12.5%	28.1%	16.5%
Feb-2018	13.4%	17.3%	21.5%	9.4%	14.9%	5.6%	14.2%
Mar-2018	13.5%	16.2%	20.7%	14.8%	23.3%	21.5%	17.8%

Evidence of a robust system to measure and improve compliance
with all Wales acute care bundles including:

- % of all strokes who receive thrombolysis and
- % receiving thrombolysis within optimal time (tbd)
- % of people who spend at least 90% of their time on a stroke unit

Supported life after stroke

PROMS

Evidence of a robust system to measure and improve compliance with all Wales rehabilitation bundles, including:

- % of people with joint care plans on discharge
- % of people who are supported to leave hospital by a skilled stroke early discharge team
- % of people who are reviewed 6 (+/- 2)

Improving information

Compliance with stroke clinical indicators, audits and bundles

Targeting research

% of people with stroke entered in to clinical trials

1b: Recruitment to Stroke CRP studies by recruiting Health Board for 2010/11 - 2018/19

Health Board	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19
Abertawe Bro Morgannwg University Health Board	40	105	106	120	22	37	29	92	112
Aneurin Bevan University Health Board	10	6	2	4	3	3	2	64	43
Betsi Cadwaladr University Health Board	59	111	98	77	82	66	8	72	43
Cardiff and Vale University Health Board	17	46	11	6	17	5	34	86	73
Cwm Taf University Health Board	0	22	14	0	0	6	7	35	20
Hywel Dda University Health Board	0	0	32	5	6	48	68	139	188
Powys Teaching Health Board	0	0	0	0	0	0	0	12	13
Welsh Ambulance Services NHS Trust	0	0	0	0	16	0	33	80	18
Non NHS Organisations	0	8	7	0	0	0	0	0	0
Grand Total	**126**	**298**	**270**	**212**	**146**	**165**	**181**	**580**	**510**

Source: HCRW

Public awareness and health prevention

% of adults who smoke

% of persons 16+ who reported smoking daily or occasionally,

	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15		2016-17*	2017-18*	2018-19
BCU	24%	23%	23%	23%	21%	21%	22%		19%	19%	18%
Hywel Dda	23%	23%	23%	21%	20%	20%	18%		19%	18%	18%
Powys	21%	23%	21%	21%	19%	19%	20%		20%	19%	16%
ABMU	24%	23%	23%	24%	23%	21%	19%		21%	21%	19%
Cwm Taf	25%	27%	26%	26%	24%	23%	23%		21%	21%	20%
Cardiff & Vale	23%	22%	21%	21%	22%	20%	18%		18%	19%	17%
Aneurin Bevan	24%	24%	24%	23%	22%	22%	21%		15%	16%	19%
Wales	24%	23%	23%	23%	22%	21%	20%		19%	19%	18%

Source: WHS until 2014-15, National survey from 2016-17 onwards

% of adults who are obese

Percentage of adults who were obese, by local health board,

Age standardised trends for Wales (d)

Table 18 Adults who were obese (age-standardised) (a)(c)

	2007&08	2008&09	2009&10	2010&11	2011&12	2012&13	2013&14	2014&15
ABMUHB	22.3%	22.8%	22.6%	23.4%	23.7%	23.4%	23.0%	23.1%
ABUHB	23.9%	23.4%	23.8%	23.9%	24.9%	25.8%	25.0%	25.9%
BCUHB	18.4%	17.9%	18.7%	19.4%	20.5%	20.8%	20.0%	21.6%
C&VUHB	17.5%	19.7%	20.7%	20.4%	19.8%	20.4%	20.0%	18.3%
CTUHB	26.2%	25.8%	25.5%	26.0%	25.9%	25.8%	27.0%	28.8%
HDUHB	20.2%	21.7%	21.8%	22.1%	23.9%	22.9%	22.0%	22.2%
PtHB	14.4%	16.4%	17.4%	18.8%	19.5%	20.0%	19.0%	20.4%
Wales	**20.7%**	**21.1%**	**21.6%**	**22.0%**	**22.6%**	**22.8%**	**22.0%**	**23.0%**

overweight/obese, by health board,

	Overweight / obese		Obese	
	2017-18	2016-17	2017-18	2016-17
Wales	60%	59%	22%	23%
ABMUHB	60%	60%	23%	25%
ABUHB	65%	63%	25%	26%
BCUHB	57%	57%	20%	21%
C&VUHB	56%	54%	18%	17%
CTUHB	65%	64%	29%	29%
HDUHB	59%	59%	22%	22%

Source: WHS
*Please note percentages from WHS and National survey are not directly comparable

PtHB	54%	55%	19%	18%

Source: National survey

% of adults who report drinking above recommended guidelines

Percentage of adults who reported drinking above guidelines on at least one day in the past week, by local health board, age standardised, 2008 - 2015

	All Wales	Abertawe Bro Morgannwg University	Aneurin Bevan	Betsi Cadwaladr University	Cardiff & Vale University	Cwm Taf	Hywel Dda	Powys Teaching
2008-2009	44%	47%	44%	44%	47%	44%	40%	41%
2009-2010	44%	46%	44%	44%	46%	44%	40%	40%
2010-2011	44%	45%	44%	43%	46%	45%	40%	40%
2011-2012	43%	44%	43%	43%	44%	45%	39%	39%
2012-2013	42%	42%	42%	43%	44%	43%	39%	40%
2013-2014	41%	41%	41%	41%	44%	41%	39%	39%
2014-2015	40%	41%	40%	39%	42%	40%	37%	38%

Source: WHS
*Please note percentages from WHS and National survey are not directly comparable

guidelines, by health board, age standardised.

	guidelines	
	2017-18	2016-17
Wales	19%	20%
ABMUHB	20%	19%
ABUHB	18%	20%
BCUHB	18%	18%
C&VUHB	21%	23%
CTUHB	17%	20%
HDUHB	20%	22%
PtHB	18%	18%

Source: National survey

% of adults who are physically active

Percentage of adults who reported being physically active on 5 or more days in the past week, by local health board, age standardised, 2003/04 - 2015

	Wales	ABMUHB	ABUHB	BCUHB	C&VUHB	CTUHB	HDUHB	PtHB
2007-2008	29%	27%	28%	31%	27%	27%	32%	36%
2008-2009	29%	28%	28%	31%	26%	27%	33%	38%
2009-2010	29%	28%	28%	31%	26%	27%	32%	38%
2010-2011	29%	28%	28%	32%	26%	26%	32%	39%
2011-2012	29%	28%	28%	31%	26%	26%	32%	38%
2012-2013	29%	28%	29%	30%	26%	26%	32%	35%
2013-2014	30%	28%	29%	33%	27%	27%	34%	35%
2014-2015	31%	28%	28%	34%	28%	28%	34%	39%

Source: WHS
*Please note percentages from WHS and National survey are not directly comparable

	reported being active		reported being inactive	
	2017-18	2016-17	2017-18	2016-17
Wales	53%	54%	33%	32%
ABMUHB	50%	52%	37%	35%
ABUHB	53%	53%	33%	33%
BCUHB	52%	49%	34%	37%
C&VUHB	57%	59%	29%	27%
CTUHB	41%	45%	44%	38%
HDUHB	59%	62%	26%	24%
PtHB	66%	67%	23%	33%

Source: National survey

The bullet points reflect the range of characteristics expected by 2016.

Outcome 1 – People are aware of and are supported in minimising their risk of stroke through healthy lifestyle choices and medication where appropriate

- more people are aware of the health harms of smoking, above limits alcohol consumption, the broader benefits of physical activity and healthy eating;
- more people are supported to stop smoking, achieve a healthy weight through healthy eating and weight management support;
- more people are physically active as a natural part of their everyday life and undertake sufficient physical activity to benefit their
- services to assess and address people's risk of stroke are easier to access and are more co-ordinated and systematic;
- medication to manage risk factors such as atrial fibrillation, high cholesterol and high blood pressure are speedily targeted to all patients who would benefit from them
- easier access to primary care services for stroke risk reduction and more direct access to certain diagnostic tests for GPs to identify and manage stroke risk factors appropriately;
- high-risk TIA and significant carotid stenosis treated within the appropriate time frame;
- more clinical advice and support available 24 hours a day, 365 days a year including more accessible information and support services provided through local pharmacies;
- more information on reducing the risk of avoidable strokes, recognising symptoms suggestive of stroke and what services to expect are available by telephone and on- line.

Outcome 2 – Stroke is detected quickly where it does occur

- more clinical advice and support available 24 hours a day, 365 days a year;
- increased awareness by public and all health care professionals that stroke (and high- risk TIA) is treated as a medical emergency
- prompt and appropriate access to evidence based assessment and treatment;

Outcome 3 - People who are risk of or have a stroke receive fast, effective treatment and care so they have the best possible chance of living a long and healthy life

- people have immediate access to appropriate access to clinically and cost-effective acute and hyperacute stroke treatment and all care is in line with latest evidence and national standards and guidelines;
- thrombolysis must be delivered to the appropriate patients within the optimal time
- access to a stroke unit bed within 4 hours giving the patient the optimum chance of best specialist care in the early acute phase
- people experience well co-ordinated services, which are compliant with national standards and guidelines, are safe, sustainable and available as locally as possible;
- specialised stroke care is planned and delivered strategically in centres of excellence matching or surpassing the best and is seamlessly connected with local stroke services
- flourishing stroke research to improve treatment and making NHS Wales an attractive place to live and work for high-calibre clinicians;
- stroke services are audited systematically and findings are used to continually improve care.

Outcome 4 - People are placed at the heart of stroke care with their individual needs identified and met so they feel well supported and informed, able to manage the effects of stroke

- everyone is treated with dignity and respect;
- life after stroke services are available as locally as possible meaning less need to travel, particularly for care after treatment;
- people have access to timely information, tailored to their individual needs, so they understand the condition, what to do, what to look out for and which service to access should problems occur;
- people's clinical and non-clinical needs as a consequence of stroke are assessed and recorded in a joint care plan and services are provided to meet those needs;
- the joint care plan is written and shared with the person involved, and their carers, and reviewed on an ongoing basis;
- care is given in the most appropriate place for the patient and not the service. Increasingly this should be in the community;
- people who need it have routine access to rehabilitation and are offered an eye examination;
- NHS, local government and third sector care is integrated and seamless
- best possible IT and communication links giving clinical staff fast, safe and secure access anywhere in Wales to the information needed to care for patients;
- patients and carers are involved in the design of services and people's views on services are sought regularly and acted on to ensure continuous improvement;
- transparently published information available on the performance of NHS stroke care in terms of safety, effectiveness and patients'
- key information on all patients who have had a stroke are recorded on clinical information systems and accessible to others who have clinical responsibility for the patient, including out-of-hours GP services, on a 24/7 basis;
- more people are able to receive palliative and end of life care and support on a 24/7 basis in the place of their choice;
- people's needs and wishes, and those of their family, are clarified, clearly recorded and are a key guide to care provided;

- families have access to pre and post bereavement support appropriate to their age

Stroke delivery plan 2016-2020

Listed below are the actions in the above delivery plan. Please answer the questions for each action.					
	Has this action been completed y/n?	**What has the HB done to support/achieve this action?**	**What was the impact of this action being completed/not completed?**	**How was this measured?**	**Additional comments**
Following a stroke, a thorough assessment of the cause and risk factors for recurrent stroke should be undertaken, unless the care is palliative, and those identified effectively managed. This may include advanced brain and vascular imaging with neuro-radiology and neurosurgical advice after cerebral haemorrhage.	Yes	Following admission a comprehensive acute stroke medical assessment and management plan is undertaken on the Acute Stroke Unit. Potential stroke risk factors are assessed by Stroke Physicians on a daily basis with access to holter monitors and carotid imaging to aid mitigation of future stroke.This process is supported by daily Consultant-led ward rounds (Mon - Fri). 90% of all confirmed stroke admissions are reviewed by a Stroke Physician within 24 hours.	Increased percentage of patients with atrial fibrillation receiving anticoagulation drug therapy.	The increased percentage of patients with atrial fibrillation with anticoagulation drug therapy (see OI and Performance sheet) represents a proxi measure which underlines this improvement in stroke prevention.	
Deliver high quality, pre-hospital interventions to all potential stroke patients.	Yes	Introduction of enhanced services to facilitate transfer of anticoagulated patients (warfarin - DES 2018 or DOACs - LES April 2019)) to receive moniting and ongoing care within primary care setting. This has enabled care closer to home, improved access and wider opportunities for patient education, signposting, risk factor management/prevention.	High uptake of the DOAC local enhanced service with SBUHB GP practices. Assurance has been recived regarding safety and effectiveness of service delivery via recent audit process. Regular monitoring of number of INR patients from secondary care to primary care and ensuring support offered to GP practices i.e buddying system with other practices.	DOAC audit as part of Local enhanced service requirement and number of residual INR patients within secondary care setting.	
Deliver continued improved compliance against the SSNAP indicators.	Yes	Sustained performance improvement against SSNAP process measures - across ten domains of stroke care (SSNAP Period 25 Report, Jan 2020). Morriston Hospital has achieved B level performance for five consecutive periods. This has been delivered through focussed service improvement with a greater emphasis on achieving more timely patient flow into the ASU. There has also been an improvement in the percentage of patients receiving a CT scan in less than one hour.	Improved compliance against the direct admissions measure. Patients are also receiving more timely diagnosis following improvements in CT access.	SSNAP reporting mechanisms.	

	Has this action been completed y/n?	What has the HB done to support/achieve this action?	What was the impact of this action being completed/not completed?	How was this measured?	Additional comments
Ensure equitable access and parity for people with protected characteristics, such as people with a learning disability on antipsychotic medication etc.	Yes	The ASU contains three trained Learning Disability Champions who work collaboratively with the Health Board Learning Disability Nurses to ensure that patient needs are understood and met to deliver optimal care. This was a hopital wide initiative to improve care to inpatients with LD.	Improved inpatient care provided to patients with Learning Disability on the ASU through close partership working between LD champions and the Health Baords wider LD service.	Patient and Relative Feedback via Friends & Family Questionnaires on the ward.	
Continue to work towards achieving fast effective care for stroke patients across all services in Wales. This includes taking into account all relevant evidence and guidance, including the National Institute for Health and Care Excellence (NICE) guidelines and quality standards.	Yes	Acute stroke service pathways and operating procedures are underpinned by NICE and RCP clinical guidelines and applicable quality standards. Acute stroke standard operating procedures were updated in October 2018 by the Clinical Lead for Stroke.	More timely access to diagnosis and specialist stroke care resulting in improved patient outcomes.	Standard SSNAP performance reports (local and national).	
Review the National Vascular Registry annual reports and implement recommendations on safe and effective practice related to stroke. These recommendations should be adhered to by all Vascular Units in Wales.	Yes	The National Vascular Registry is reviewed annually, and recommendations adhered to.	The vascular network is within national averages	Monitored as part of the National Vascular registry.	
Ensure stroke services have access to evidence-based and prudent systems for long-term monitoring for detection of hidden PAF.	Yes	Daily holter monitor service available to stroke patients.	Reduction in risk of future stroke	The increased percentage of patients with atrial fibrillation with anticoagulation drug therapy (see OI and Performance sheet) represents a proxi measure which underlines this improvement in stroke prevention.	
Ensure that personalised secondary prevention is discussed with stroke survivors at regular reviews, including six month reviews.	Yes	Personalised secondary prevention is discussed during stroke follow up consultations. Life After Stroke Clinic and Life After Stroke Group sessions are also effective forums designed to support well-being and future risk management for stroke survivors. The *Life After Stroke Group* commenced in January 2019 and is designed to provide professional and peer support to stroke patients with ongoing concerns through direct links with the Stroke Association, stroke therapists, consultants, nurse specialists and wider support services.	Improved awareness of actions to reduce the risk of future stroke	Service audits	
Continue to provide education and public awareness campaigns on stroke prevention and risk factors.	Yes	Life After Stroke Group provides ongoing professional and peer support and education to stroke patients. HMQ Advisor sare managed by the Living Well Team working closely with the Expert Patient Programme, utilising opprotunities to present and influence lifestyle choices.	Improved awareness of actions to reduce the risk of future stroke	Service audits	

	Has this action been completed y/n?	What has the HB done to support/achieve this action?	What was the impact of this action being completed/not completed?	How was this measured?	Additional comments
Measure the outcomes of these primary care interventions and assess the effectiveness of this strategy on stoke prevention via effect on stroke incidents.	Yes	Improved access to smoking cessation support via the 'Help me Quit' workstream in primary care and community setting i.e General Practice, community pharmacies etc. Promotion of Making Every Contact Count (MECC) within primary and community services to raise awareness of stroke risk factors and provide signposting to appropriate services within the community. This is also reflected in the recruitment of Social Prescribers within Clusters as part of cluster transformation with emphasis on co-production, health literacy and patient activation.	Good uptake within community pharmacies delivering smoking cessation advice and treatment, but further scoping work needed to increase and maximise service delivery. Transfer of 'Help me Quit' community services fro PHW to PCCS provides opportunity to improve links with cluster working.	PCCS audits/performance data	
Follow the RCP rehabilitation and recovery guidelines and measure progress through the SSNAP clinical audits and participation in the Patient Experience Outcome Measures (PROMs) and the Patient Related Outcome Measures (PREMs) programme.	Yes	SSNAP audit results are reviewed through the Stroke Deliver Group. The Health Board has recently established a therapy working group to review the new QIMs. The nationally agreed stroke PROMs are expected to be released in April 2020	NPTH were not completing and therefore were unable to measure performance agianst guidelines - this is because numbers of patients ere low	All sites now inputting into SSNAP	
Explore the benefits of an inpatient stroke unit capable of providing stroke rehabilitation for all people with stroke admitted to hospital;	Yes	2015/16 investment in seven day therapy services on the ASU. It should be noted that Speech & Language Therapy is not consistently available across seven days. OT and/or Physiotherapy is available seven days a week on the Morriston site	Improved therapy continuity for patients on the ASU. This investment also delivered improved patient flow.	Local service evaluation conducted to outline benefits of the extended therapy provision (2016). Ongoing monitoring of performance via weekly SSNAP report.	Seven day therapy is not available in NPTH and Singleton Hospital.
Have a specialist supported discharge service to enable people with stroke to receive rehabilitation at home or in a care home;	No	The Health Board has recently committed a 200k investment to implement an ESD service for stroke. The provisional service start date is April 2020.	The Health Board are in the process of establishing a stroke ESD team. This is expected to be operational in April 2020		
Have specialist rehabilitation services capable of meeting the specific health, social and vocational needs of people with stroke of all ages;	No	Stroke ESD service to be implemented which will identify and refer on for ongoing health and social care needs. Extremely limited access to vocational rehab/ support	Nationally we are aware that sustainability in employment or return to work is difficult without support	The lack of vocational support is currently not measured due to lack of community services to identify need. ESD service will be monitoring onward referrals to supprt ongoing health and social care needs	
Develop services capable of delivering specialist rehabilitation in out patient and community settings in liaison with in patient settings.	No	Stroke ESD will link with existing CRT's to provide specialist advice and support as required	This will enable more patients to be supported witin the community and acheive optimum outcomes	A number of "cross- worked" cases can be recorded	

	Has this action been completed y/n?	What has the HB done to support/achieve this action?	What was the impact of this action being completed/not completed?	How was this measured?	Additional comments
Develop structured services for patients who have had a stroke at six months and one year after the stroke, and then annually.	Yes	Six month *Life After Stroke Clinic* appointments (one to one consultation, telephone reviews are available to aptients. *Life After Stroke Group* is also available on a referral basis to patients with ongoing care/support needs. This service possesses close links with with locality nursing homes. All services structured around patients needs. The group currently is only for mild/moderate with the hope of developing further to include the severe cohort of stroke patients.	Improved continuity of care, support and rehabilitation to stroke patients	LAS Group effectiveness is measured through local service audits.	
Actively signpost patients who have been affected by stroke to relevant support services.	Yes	Stroke Association information packs are provided to patients/carers upon discharge from the ASU. These packs make reference to relevant stroke support services and educational material. Patients are also refered (from secondary care) into the *Down to Earth Project* and *LAS Group* .	Improved awareness and access to stroke support services for patients.	N/A	
Ensure appropriate education and self management programmes are in place.	Yes	Education and self management is provided during the acute stroke phase of care on the ASU, during stroke follow up clinics at *Life After Stroke* clinic consultations and at the *Life After Stroke Group* .	Improved availability of patients education material and self management programmes.	N/A	
Increase opportunities for improving opportunities for peer support amongst stroke survivors.	Yes	This is provided to patients through the *Life After Stroke Group* .			
Ensure clear strategies on what physical and psychological support is available in their area and how people living with stroke and their families can access it regardless of where they are living, in the community or in nursing or residential homes.	No				There is only access to clinical psychology for vocational neurorehabilitation.
Improve vocational rehabilitation and provide opportunities for volunteering.		The HB has provided a limited resource to neuropsychology to enable the service to accept stroke patients who can work within a group setting to provide an education around vocatioal needs and volunteering opportunites (however, this is a very limited numbder)	TBIS have strong comminuty links with SWANS, and workplace opprtunities	Through the numbers attending	

	Has this action been completed y/n?	What has the HB done to support/achieve this action?	What was the impact of this action being completed/not completed?	How was this measured?	Additional comments
Plan and deliver services, in line with appropriate clinical pathways, to meet the ongoing needs of stroke patients, including providing an individualised palliative care plan, where appropriate, in line with the Delivering End of Life Care Plan	Yes	A SIG funded qualitative research study to evaluate the impact of advanced care planning in end of life stroke care was undertaken on the ASU in 2017. Specialist ACP training, co-ordinated by Consultants in Palliative Medicine, was delivered to medical and nursing staff on the ward. This research study was undertaken in collaboration with Swansea University. Access to Palliative Care Services also available.	Improved patient, relative/carer and staff experience in end of life cases through more robust advanced care planning.	Qualitative research project.	Refresher ACP training to be delivered in April 2020
Increase the number of well-designed stroke studies undertaken in Wales. Work with Health and Care Research Wales researchers and Centres to increase the number of Wales led studies in addition to those undertaken in Wales but led from elsewhere.	Yes	In the last 3 years, Morriston has been undertaking 16 stroke trials, some of them are complete whilst 8 are actively ongoing. This has been possible due to close working with Health care research wales. Swansea Bay (Morriston) has a stroke research lead who is also appointed as Health care research Wales' deputy stroke research lead. Morriston remains the top recruiting centre for acute stroke	The number of participants in stroke trials across the health board have tripled in the last 3 years.	Increased number of patient participation in clinical trials. Developed own research trial funded by SIG. Number of clinical trials undertaken in the healthboard are available on the clinical research portfolio platform. This has revealed an increase in number of trials taking place within the healthboard.	Since Morriston hospital is the only acute admitting site for stroke in Swansea Bay, all the acute stroke trials take place here. There is excellent support from health care research wales in providing stroke research nurse support for these trials. We work in close collaboration with Swansea university trials unit.
Increase the number of individuals actively taking part in stroke research. Work with Health and Care Research Wales Support and Delivery Service to develop the additional infrastructure required for the delivery of complex intervention studies across care settings, including home. This includes ensuring that patients and carers have access to well design studies across Wales and across care settings whilst minimising the impact on their daily lives.	Yes	All patients are routinely screened for eligibility in stroke trials. All eligible patients are given the opportunity to participate following the Good Clinical Practice regulations.	Over 200 patients have been recruited in Morriston for stroke research trials. This is higher than many other healthboards and the highest in acute stroke research compared to all other Welsh healthboards.	Number of participants in clinical trials have tripled in the last three years.	
Increase the number of members of the public (to include patients and carers) involved and engaged in research activity. Create a robust and meaningful process for involvement of patients and carers with stroke needs at all stages of research activity, from study design to implementation and dissemination.	Yes	Increase in the number of relatives consulted for research trials. Increase in research activity due to early and clear communication with patient and family. Family members are consulted appropriately in providing proxy consents within the regulations set by the individual research trials team .	Improved participation in clincial trials	Increase in the number of trials as well as recruitments. Increase in the requests from various centres for participation in new trials	
Ensure arrangements are in place allowing research to feed into organisations' mechanisms for uptake of best practice and service change, improving clinical practice and patient outcomes.	Yes	Stroke research team are regularly attending conferences, both Nationally and internationally, with publications and poster presentations of the research work, thereby aiding in dissemination of the work done locally.	Improving awareness amongst all staff about the ongoing trials	Increasing number of posters and publications from the department	
Monitor the key performance indicators set out in the Delivery Framework for the Performance Management of NHS R&D that are relevant for this delivery plan	Yes	Health care research Wales (HCRW) support and delivery unit are working closely with the R& D team delivering research work and are regularly updated of the performance	New studies are dissemeinated to the department via HCRW and R& D team involved in completing the processes before a trial can be initiated	Again, by increased number of research studies	

	Has this action been completed y/n?	What has the HB done to support/achieve this action?	What was the impact of this action being completed/not completed?	How was this measured?	Additional comments
When data is required to be captured ensure a R&D lead is identified and provides visible R&D leadership for this Delivery Plan.	Yes	There is an R&D lead who supervises the stroke studies within the health board and regular meetings are held to update progress of each study	Joint working between university and hospital	Time to set up trials locally is coming down	
Promote the importance of R&D through participation in studies, and recognition and understanding by all NHS and other staff of the role that research plays in increasing and delivering good quality care, including staff recruitment, retention and development.	Yes	Regular research meetings involving R&D members to discuss progress of current active trials as well as to discuss potential new trials.	Potential new studies are discussed and expression of interest forms are submitted	Increasing number of studies taking place locally	
Provide high quality, reliable advice in line with NICE and RCP guidelines.	Yes	Acute stroke service pathways and operating procedures are underpinned by NICE and RCP clinical guidelines and applicable quality standards. Acute stroke standard operating procedures were updated in October 2018 by the Clinical Lead for Stroke.	More timely access to diagnosis and specialist stroke care resulting in improved patient outcomes.	Standard SSNAP performance reports (local and national).	
Support the 'Making Every Contact Count' approach with staff and key partners.	In progress	Plans are in place to train the stroke workforce to ensure that staff are upskilled to offer advice and signpost patients to appropriate services to make beneficial lifestyle changes following a stroke or TIA. Community Staff will have access to the HMQ advisor aligned to their Cluster to ensure early access and referral into the service. Smoking status of patients is part of the Nursing ssessment and patients can be referred at initial visit/assessment with consent.			

	Has this action been completed y/n?	What has the HB done to support/achieve this action?	What was the impact of this action being completed/not completed?	How was this measured?	Additional comments
Recognise and respond to the requirement for continuous service review and improvement.	Yes	A weekly acute stroke performance review is undertaken by key stakeholders of the acute hospital pathway (led by the Clinical Lead for Stroke). This process is underpinned by patient level information to scrutinise lead times to key pathway interventions. Improvement actions are generated and driven locally and are monitored at a hospital and health board level (via business/ perfomance and stroke board meetings). In November 2018 a peer review of the Morriston Hospital thrombolysis pathway was undertaken (led by the WG Delivery Unit). This led to a service action plan designed to streamline delivery of thrombolysis care. In addition, improvements in TIA services in SBUHB resulted in the service being nominated for a BMA Leadership Award in 2019. This nomination recognised a significant improvement in TIA waiting times (reduced to 3 days from 9 days following focussed improvement work led by the Clinical Lead for Stroke).	More timely access to diagnosis and specialist stroke care resulting in improved patient outcomes. Sustained improvement against SSNAP process measures (five consecutive periods with a recorded B score). TIA waiting times reduced to 3 days following dedicated service improvement work.	SSNAP audit data and local TIA waiting times data	
In line with the principles of prudent healthcare, ensure that smoking cessation support is offered as a first-line intervention for smokers. Implement the Wales Obesity Pathway at all levels, for both adults and children.	In progress	Stroke lead has met up with public health wales to discuss interventions to tackle risk factors after TIA. Public health team were planning to do face to face training of nursing staff and Band 3s in TIA clinic to inform them of the up to date Smoking cessation and obesity pathways, so patients and relatives can be given appropriate advice from TIA clinics	Awaiting communication from public health		
Lead a comprehensive prevention programme to minimise population-level risk of disease, including stroke.	Yes	HMQ Campaigns and literature made available to the public.	Communications campaign to be developed to support the roll out of the HMQ campaigns and initiatives.		
Use telehealth/telecare to help patients self care and aid rehabilitation.	In progress	The Life After Stroke programme is investigating the use of telehealth as a means of delivering the education programme ensuring stroke survivors can access this at a time and place suitable to them. The Service has access to telecare to monitor and provide a response to patients if required. At present with no specialist community service, telehealth for rehabilatation hs not been explored but the plan is to use Ipads within ESD to develop this	Telecare provides reassurance to patiest ad carers and supports transition to home from hospital	Number of referrals for acess to telecare is monitored via our LA partners	

Please list below the funding initiatives that have been funded directly from Welsh Government money allocated through the implementation group

Date	Project name	Aims	Funding amount	Source of funding	Was the project a success?	How did it impact on patients/pathways?	How is the HB maintaining/ building on this
2015	Example - Staff training	Improve inpatient safety by raising awareness of stroke patient needs and symptoms with ward staff	£100,000	WG and internal	Yes - Training caried out across 3 sites and 10 wards	Directly improved inpatient care and led to a decrease in patients deteriorating	Training elements have been added to the regular training agenda for all staff with costs being met from HB training budget