<u>Supplementary information</u>

Appendix A: Study Information Letter





Rachel Barter | Clinical Nurse Consultant Hepatitis C Research
Public Health Services | Department of Health
Ph: 6166 0634 | Fax: (03) 6173 0821 | Email: Rachel.Barter@health.tas.gov.au

«Title» «GP_First_Name» «GP_Last_Name»
«GP_Location»
«GP_Business_Address»
«City» «State» «Post Code»

«Date»

Dear «Title» «GP_Last_Name»,

Re: Pilot project of active hepatitis C case management for new notifications in Tasmania

The simplicity of new treatments for hepatitis C make it possible for Australia to become one of the first countries to eliminate hepatitis C. **Despite the new treatments becoming available on the Pharmaceutical Benefits Scheme in 2016, half of Australians living with hepatitis C remain untreated¹.**

In accordance with Guidelines under the *Public Health Act 1997*, hepatitis C is a notifiable condition to the Director of Public Health. Public Health Services (Department of Health (DoH), Tasmania) and the Burnet Institute (Melbourne) are conducting a pilot project to determine if a new model of engaging General Practitioners (GPs) who provide care for diagnosed patients will increase treatment uptake (University of Tasmania HREC H0018418).

The project compares current DoH processes following a notification of hepatitis C (standard of care) with active engagement of GPs to provide enhanced case management (new model of care). All GPs in Tasmania who have diagnosed hepatitis C during the study period will be eligible to participate in the project and will be randomly assigned to either the new or standard model of care. This new model will be delivered by a DoH Clinical Nurse Consultant (CNC) who will contact the diagnosing doctor by phone and provide support, as needed, to facilitate hepatitis C pre-treatment testing, treatment, and post-curative support. The Clinical Nurse Consultant will also offer direct patient contact if requested by the GP. A follow-up evaluation phone call will be made to all participating GPs twelve weeks after the initial hepatitis C notification to assess whether enhanced case management results in increased uptake of hepatitis c treatment.

DoH records indicate that you recently requested testing that has resulted in a hepatitis C notification and you have been randomised to participate in the **new model/standard model of care.**

Our CNC Rachel Barter will contact you soon to invite you to participate in this project which we hope you will consider. Verbal consent will be sought on initial phone contact by Rachel. Your involvement will contribute to

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¹ Burnet Institute and Kirby Institute. Australia's progress towards hepatitis C elimination: annual report 2019. Melbourne: Burnet Institute: 2019.

a rigorous evidence base for future practice, improve the opportunity for Tasmanians living with hepatitis C to be cured and assist us achieve our hepatitis C elimination goal.

If you wish to talk to Rachel Barter beforehand, please contact her on 6166 0634 or rachel.barter@health.tas.gov.au.

Yours sincerely,

Dr. Mark VeitchDirector, Public Health
Tasmanian Director of Public Health

Dr. Joseph Doyle MPH PhD FRACP FAFPHMInfectious Diseases Physician
Deputy Director, Disease Elimination Program
Burnet Institute

Appendix B: GP questionnaire

This is the GP Form which will collect data on the GP and will randomise the GP using the REDCap tool online. This needs to be filled in only once for every GP.

A randomised controlled trial of active case manage	ment to link hepatitis C notifications to hepatitis C treatment in Tasmania
GP Form	Page 1 of 2
GP ID (REDCap assigned)	19.
	Approximation of the second se
GP ID_TNDD (as assigned by TNDD)	
entation from the day self-steel	
Name of GP	***************************************
What is the postcode of the clinic where this GP works?	\(\text{\frac{1}{2}}\)
Alternative postcode	
Please provide some information for GP ID [reco	ord id
Please confirm that all eligibility criteria for GP have been met	O Yes O No
Group to which GP has been randomised	Standard of Care Intervention
Has GP been reached yet?	○ Yes ○ No
Please confirm that GP consents to participate in the study	O Yes No
Please close this form and do not use this GP ID anymore.	
Please provide reason why GP is not willing to consent	Time constraints Privacy issues Know enough about HCV Patient already referred to a specialist Patient no longer attends practice, transferred Patient is lost to follow up Declined to give a reason Other
Please specify 'other'	
Does GP have previous experience in HCV care?	○ Yes ○ No
Have you ever written a DAA script?	O Yes O No
14.09.2020 10:45	projectredcap.org REDCap®

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		Page 2 of 2
Please close this form and do not use this GP ID anymore.		
Has the GP been reached at the 12 week evaluation phone call?	○ Yes ○ No	
Is GP lost to follow up? (after 3 contact attempts over a 30-day window)	○ Yes ○ No	
Number of HCV notifications associated with GP?	One Two Three Four Five	

14.09.2020 10:45

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REDCap*

Appendix C: Notification questionnaire

This is the Notification form, which will record information about each eligible Notification GPs can have multiple notification during the study period.

GP ID (REDCap assigned)	
This is the Notification form, which will record GP: [record_id], [gp_name] Arm: [treat] GP co Notifications Forms if GP has consented to part This needs to be specified in the GP Form	nsent: [gp_consent] Please only fill in
Enter Notification ID	
Enter Resident (Patient) ID	
WARNING: Notification ID cannot be the same as Patient II	D.
What is the lab notification received date on the notification?	
is this notification a confirmed or repeat notification?	○ Confirmed (Ab+) ○ Confirmed (PCR+) ○ Repeat (Ab+) ○ Repeat (PCR+)
WARNING: Since this notification is a (notification), please check whether patient (patient_id) has already enrolled in the study with another notification.	No, patient [patient id] is new to the study Yes, patient [patient id] has already enrolled in our study with same GP [gp_name] Yes, patient [patient id] has already enrolled in our study with DIFFERENT GP
is there a related Notification ID to this	○Yes
[notification] notification?	Õ No
What kind of notification is the related Notification D?	○ Confirmed PCR+ ○ Repeat Ab+ ○ Repeat PCR+ ○ Confirmed Ab+
Enter related [related_id_2] Notification ID	
WARNING: The related notification ID cannot be the same	as the current notification ID.
WARNING: The related notification ID cannot be the same	as the patient ID.

What is the date of the related notific	cation?	2.00			
Is GP same for [related_id_2] Notifica [related_id_3]?	tion ID	8	Yes No		,
Is the other GP participating in this s	tudy?	8	Yes No		
Enter GP ID				***************************************	
WARNING: same ID as GP ID.					
1. Clinical summary for Notific	ation ID [no	otification_id]			
Please fill in at time of lab no	tification re		ab_date]		
	detected	not detected	not tested	testing to follow (test ordered)	Unknown
Hepatitis C Antibody (Anti-HCV)	0	0	0	0	0
Hepatitis C Virus by Nucleic Acid Testing (PCR or HCV RNA)	0	0	ŏ	0	0
WARNING: This combination is not co	orrect.				
What is RNA test date on the notifica	tion?				
		(N sa	ote that for a me as the RNA	repeat PCR the lab do A date)	ate is the
2. Enhanced Form For Confirmed (Ab+) notificat	ions only				
Has enhanced form been sent back t		Ö	Yes No Unknown N/A		
What is the Enhanced Form date (da DoH)?	te reviewed by				
Has this person had a negative hepa test within the past 24 months?	titis C antibody	0	No Yes Unknown		-
Date of last negative test		_			

Confirmation that this infection wa previously Interstate and to the Na Diseases Surveillance System?			as Previously Noti nation Status rema	
Has patient had any of the risk exposure)	following risk exp	oosures (please tick	all options tha	t apply for each
	Yes (within last 2 years)	Yes (over 2 years ago)	No	Unknown
Injecting drug use	0	0	0	0
Imprisonment	0	0	0	0
Sexual partner of opposite sex with HCV	0	0	0	0
Sexual partner of same sex with HCV	0	0	0	0
Household contact with HCV	0	0	0	0
Perinatal transmission	0	0	0	0
Tattoos	0	0	0	0
Acupuncture	0	0	0	0
Ear or body piercing	0	0	0	0
Occupational needlestick/biohazard injury in non- healthcare worker	0	0	0	0
Non-occupational needlestick/biohazard injury (other than IDU)	0	0	0	0
3. Patient information of Pa	tient [patient_id]	· · · · · · · · · · · · · · · · · · ·		-
Gender		O Male Female Other Unknown		,

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In which LGA does the patient live?	○ Break O'Day
in which can over the patient liver	OBrighton
	Burnie
	Central Highlands
	O Central Coast
	○ Circular Head ○ Clarence
	O Derwent Valley
	O Devonport
	O Dorset
	O Flinders
	George Town
	Glamorgan/Spring Bay
	○ Glenorchy
	O Hobart O Huon Valley
	Kentish
	King Island
	O Kingborough
	O Latrobe
	O Launceston
	Meander Valley
	Northern Midlands
	O Sorell
	O Southern Midlands O Tasman
	O Waratah/Wynyard
	O West Coast
	O West Tamar
	Ŏ Unknown
Has patient had previous HCV treatment?	○ Yes
	O No
	○ Unknown
	○ N/A
Previous HCV treatment outcomes	O Patient had a sustained virological response (SVR)
	>12 weeks post treatment
	 Patient did not have a sustained virological response (SVR) >12 weeks post treatment
	○ Unknown
4. Contact with GP for this notification Please sp	
Intervention arm: 2 weeks - 3 months Control are	
information can be updated through 3 month per	CAMPA .
Have you been able to contact the GP for this Notification?	O Yes
Notification?	No (Please use a 30-day period to try to contact GP)
the second secon	
How many call attempts prior to reaching GP for this Notification?	
	(Please specify the total number. Leave blank if unknown.)
How many call attempts were made to reach GP for this	
Notification?	(Please specify the total number. Leave blank if
	unknown.)
14.09.2020 10:52	projectredcap.org REDCap®

For GPs in the Control arm: has GP returned Enhanced Form (CRF) and/or did you call?	☐ GP had filled in our form and sent back ☐ GP was called ☐ Other (specify) (Check all that apply.)
Other reason why enhanced form not returned	
What is the constant of the co	
What is the reason this GP cannot be contacted for this notification?	GP is no longer working at the practice GP referred patient to specialist care GP declined to be contacted Practice no longer exists Unable to access contact details for the GP Other (specify)
Other (specify)	

F. Anniatana anniana	
5. Assistance required Intervention arm only.	
mer rention and only.	
Please specify the assistance required by [gp_n	ame] for this notification.
What kind of assistance does the GP need in managing Hepatitis C care/ what questions do they have?	Level 1: Information on the virus Level 2: Further testing advice Level 2: Conducting pre-treatment work-up assessment Level 3: DAA prescription guidelines, including linkage to specialist consultation Level 3: Advising on conducting post-cure management including methods of follow-up to manage risks; including harm minimization, reducing re-infection risk, opioid substitution therapy Level 3: Linking/referral to resources for patients with cirrhosis or other concerns to specialist support for ongoing management Level 4: Direct patient contact Other (Check all that apply.)
Please specify "other"	
6. Calls and contact with GP or Patient	
Intervention arm only.	
Please specify the calls that you have had with	this GP over the 3 month period. Check all
that apply	
You can update this information any time during	

				Page 6
Choose moments of contact with GP or Patient				
Please specify the date of the first cont	act			
Please specify duration of first call in m	inutes	32		
		(Please leave blan	nk if unknown.)	
Were prior call attempts made before s contact?	uccessful	○ Yes ○ No		
Details of unsuccessful prior calls				
Western British Charles and and		0.00		
Was this call with the GP or the patient	6 :	O GP O Patient		
Please specify the date of the second co	all	-		
Please specify duration of second call in	minutes	0.0000000000000000000000000000000000000		
		(Please leave blan	nk if unknown.)	
Were prior call attempts made before s contact?	uccessful	O Yes O No		
Details of unsuccessful prior calls				
Was this call with the GP or the patient	7	○ GP ○ Patient		
Please specify the date of call 3		30.50		
Were prior call attempts made before s	usaasse ful	○ Yes		
contact?	uccessiui	O No		
Details of unsuccessful prior calls				
Please specify duration of call 3 in minu	tor			
ricase specify duration of call 5 in minu	1003	(Please leave blan	nk if unknown.)	
Was this call with the GP or the patient	7	○ GP ○ Patient		
Please specify the date of call 4				
				RED

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	Page 7 of 10
Were prior call attempts made before successful contact?	○ Yes ○ No
Details of unsuccessful prior calls	Dr.
Please specify duration call 4 in minutes	
	(Please leave blank if unknown.)
Was this call with the GP or the patient?	○ GP ○ Patient
Please specify the date of the call 5	*
Were prior call attempts made before successful contact?	○ Yes ○ No
Details of unsuccessful prior calls	
Please specify duration of call 5 in minutes	
	(Please leave blank if unknown.)
Was this call with the GP or the patient?	O GP O Patient
Document other modes of communication with GP if applicable e.g. sending GESA guidelines or other links.	
7. Level of assistance provided	
Intervention arm only.	
Please specify the level of assistance provided of 3-month period.	to GP [gp_name] for this notification at the end
Has assistance been provided to GP?	O yes
Level of assistance provided to GP [gp_name] for this Notification	level 1: information level 2: testing, awareness, pre-treatment work-up level 3: DAA guidelines, treatment support, post-cure management, referral to specialist level 4: direct patient contact other (Check all that apply.)
Please specify 'other'.	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
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During which call did you start the intervention?	Call 1 Call 2 Call 3 Call 4 Call 5 Unknown
During the direct-patient call, what intervention has been done?	Referral back to GP Referred to online resources Direct information to patient (Check all that apply.)
WARNING: This call has not been recorded above.	
Has GP finished the intervention? (i.e. all required assistance has been provided to GP)	○ Yes ○ No ○ Other (specifiy)
Other intervention outcomes?	

Why not?	 could not reach GP GP did not want to be called back again other patient is lost to follow up unknown
During which call did you finish the intervention?	Call 1 Call 2 Call 3 Call 4 Call 5 Unknown
WARNING: This call has not been recorded above.	
8. Outcomes Intervention arm and Control arm. Please specify the outcomes (testing and treating)	ng) after 3 months
Please provide the date of recording information on the outcomes	
Has RNA test been ordered yet?	Yes No Unknown Yes, but by another GP Yes, but by a specialist
What do you think is the number 1 barrier for not RNA testing this Notification?	Patient lost to follow up (no longer engaged i care at this clinic) Patient needed to be referred to specialist Patient refused to undergo puncture Unsuccessful attempts at blood draw Other (specify)
14.09.2020 10:52	projectredcap.org REDC

Please specify other barrier for no RNA testing	
Have results come back yet?	○ Yes ○ No ○ Unknown
What is RNA test date?	
	(Note that for a repeat PCR the lab date is the same as the RNA date)
What was the result of the HCV RNA test	O Detected Not detected Indeterminate
Were appropriate pre-treatment work-up blood tests collected e.g. full blood count (platelet count), liver enzymes (AST)	○ Yes ○ No
What is the number 1 barrier for no pre-treatment work-up blood tests	Patient is lost to follow-up Patient declined blood draw Patient was referred to a specialist Patient transferred to another practice Other (specify)
Other pre-treatment blood work up barriers	
Has GP written a DAA script for this notification?	○ Yes ○ No ○ Unknown
What is the number 1 barrier for not writing a DAA script?	Patient is lost to follow-up at the practice Patient has transferred to another practice Patient was transferred to a specialist Patient declined treatment Other (specify)
Other reason for no DAA script	***************************************
Has treatment aiready started?	○ Yes ○ No ○ Unknown
What is the treatment start date?	*******************************
What do you think is the number 1 barrier for not treating this Notification?	Patient lost to follow up Patient needed to be referred to specialist Patient refused treatment Other
Please specify other barrier for not treating	***************************************

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			Page 10 of 10
Consent for a future follow up call (to assess sustained virologic response)	○ Yes		75
sustained virologic response)	○ Yes ○ No		
			_
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Appendix D: Screening Log

	Weekly Tally of Notified Test Results											Exclusion Criteria											
₩eek	Effective Dates	Total	Lab dx	Lab dx		Eligible	GP Prev	Res ID ·	Exclud	Running	Running		Not	Correct.	Special.	Nurse	Sexual	Family	Hs	Hosp.	Other	Weekly total	Running tally
		notified test	(Ab+)	(PCR)		GP's	Enrolled	related	ed	tally	Tally		basedin	service		Prac	Health	Planning		based		("must	(exclusions)
		results						not.		(Eligible	(total not)		Tasmani							settin		match	
										GP's)			a							g		exluded)	
W1	31/08/2020 - 06/09/20	0	0	0	0	0	0	0			0		0	0	0	0	0	0	0	0	0	0	0
W2	07/09/2020 - 13/09/20			0	0	0	0	0			0		0	0	0	0	0	0	0	0	0	0	0
W3	14/09/2020 - 20/09/20			0	0		0	0	0		0		0	0	0	0	0	0	0	0	0	0	0
₩4	21/09/2020 - 27/09/20			0	0	0	0	0		C	0		0	0	0	0	0	0	0	0	0	0	0
W5	28/09/2020 - 04/10/20			0	0	0	0	0		0	0		0	0	0	0	0	0	0	0	0	0	0
W6	05/10/2020 - 11/10/202			0	0	0	0	0		C	0		0	0	0	0	0	0	0	0	0	0	0
W7	12/10/2020 - 18/10/202			0	0	0	0	0		0	0		0	0	0	0	0	0	0	0	0	0	0
W8	19/10/2020 - 25/10/202			0	0	0	- 0	- 0		C	0		0	0	0	0	0	0	0	0	0	0	0
W9	26/10/2020 - 01/11/202	0		0	0	0	0	0		0	0		0	0	0	0	0	0	0	0	0	0	0
W10	02/11/2020 - 08/11/202			0	0	0	- 0	- 0		C	0		0	0	0	0	0	0	0	0	0	0	0
W11	09/11/2020 - 15/11/2020			0	0	0	0	0			0		0	0	0	0	0	0	0	0	0	0	0
W12	16/11/2020 - 22/11/2020			0	0	0	- 0	- 0		C	0		0	0	0	0	0	0	0	0	0	0	0
W13	23/11/2020 - 29/11/202			0	0	0	0	0			0		0	0	0	0	0	0	0	0	0	0	0
W14	30/11/2020 - 06/12/202			0	0	0	0	- 0		C	0		0	0	0	0	0	0	- 0	0	0	0	0
W15	07/12/2020 - 13/12/202			0	0	0	- 0	0		0	0		0	0	0	0	0	0	0	0	0	0	0
W16	14/12/2020 - 20/12/202			0	0	0	0	0		C	0		0	0	0	0	0	0	0	0	0	0	0
W17	21/12/2020 - 27/12/202		- 0	0	0	0	0	0			0		0	0	0	0	0	0	0	0	0	0	0
W18	28/12/2020 - 03/01/20:		0	1 0	0	0	0	0	0	J	0	L	. 0	0	0	0	0	0	0	0	0		0
W19	04/01/2021 - 10/01/202		0	0	0	0	0	- 0		C	0		0	0	0	0	0	0	- 0	0	0	0	0
W20	11/01/2021 - 17/01/2021			0	- 0	0	- 0	- 0			0		0	0	0	0	0	0	0	0	0	0	0
W21	18/01/2021 - 24/01/202		0	0	0	0	0	- 0		C	0		0	0	0	0	0	0	- 0	0	0	0	0
W22 W23	25/01/2021 - 31/01/202		0	0	0	0	0	0			0		0	0	0	0	0	0	0	0	0	0	0
W23	01/02/2021 - 07/02/202		2	0	0	1	0	0			2		0	- 1	0	0	0	0	0	0	0	1	1
W24	08/02/2021 - 14/02/202	5	2	2	1	3	1	1		4	7		0	0	0	0	0	0	0	0	0	0	1
Р	re enrolment P	ost enrolmer	nt Lo	oa I	Notifica	tion activi	tv E	aily Act	ivity	(+)				4	•			•		•		•	
				-			*		*														

Appendix E: Sample size calculations

The sample size calculation is powered to cover a range of the most probable and realistic assumptions.

- 1. Treatment uptake in standard of care arm: Existing data estimates between 3-8% of people start therapy within three months (when our primary outcome will be assessed): data on national treatment uptake by specialists and general practitioners,[16] among people who inject drugs,[17] and in traditional referral to outpatient services all estimate treatment uptake of 8% or under at three months.[18] In this study, we will assume the higher (and therefore more conservative, biasing towards the null hypothesis) estimate of treatment uptake of 8% at three months in the control arm.
- **2. Treatment uptake in intervention arm:** is estimated at 25% based on best estimates of intervention acceptance by GPs and follow up, RNA prevalence among those notified with HCV antibody, community treatment eligibility, and best estimate of intervention effect.
- Acceptance and participation of general practitioners is estimated at 90% at 3 months based on general practice acceptance of prescribing support (fewer than 10% of South Australian general practitioners declined SA Health support during remote follow up; unpublished data).
- RNA prevalence among those HCV-antibody positive has been measured 50-70% in surveillance data over the past 10 years.[19]
- Community treatment eligibility has been observed at 88% (10% cirrhosis, and 2% HIV or HBV coinfection or other serious comorbidities) in our Australian community treatment trials.[20]
- Intervention of primary care support is estimated to see 65% of eligible patients start on treatment at three months. We have informed this estimate based on pilot data from primary care support provided in Victorian models of support for general practitioners (91% treatment uptake among HIV-prescribers[21]; 74% treatment uptake in testing support models in community settings[22]; 71% follow up for treatment in a South Australian model of health department remote follow up, unpublished data). We have conservatively assumed a lower rate of treatment uptake among all eligible, viraemic patients of 65%.

Based on the most conservative of these assumptions, we estimate 25% (i.e., $0.90 \times 0.50 \times 0.88 \times 0.65$) of individuals in the intervention arm will commence treatment.