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Re Official Information Request – Cancer Care

I refer to your official information request dated 27 February 2019 for the work and analyses that have been undertaken to examine cancer inequity in the Northern Region.

Please find enclosed information in response to your request.

In order to provide you with further context in terms of the information that you have requested, please note that we have applied the World Health Organisation definition of 'health equity' and the definition of 'health inequities' established by the Health Quality & Safety Commission New Zealand which are as follows:

- Health equity is the absence of avoidable or remediable differences among populations or groups defined socially, economically, demographically or geographically
- Health inequities are avoidable and unfair differences in health outcomes

Regional work on cancer equity in the Northern Region

As noted in discussion with you, exploratory work has very recently begun to identify key areas of cancer inequity for the region that will be considered by the Northern Region Integrated Cancer Board and be used to inform the subsequent development of a proposal for addressing these key areas. It is anticipated that this work will take 12 months and will involve further review by the Northern Region Integrated Cancer Board and other regional decision-making bodies.

The context for this current work is provided by the Northern Region Long Term Investment Plan (NRLTIP) which provides a new perspective on the challenges and opportunities that face our region in the next two decades. It identifies potential responses to future challenges that will guide an investment path for the region including ensuring every dollar is spent in a way that optimises health gain for all.

Since completion of the NRLTIP, further work has also been initiated on the diagnosis and treatment stages of the cancer journey to inform regional decisions about investment in facilities, equipment and information systems that support these activities.

Health equity is also an important theme of the NRLTIP. Whilst the NRLTIP has highlighted that there is much to be proud of in the Northern Regional health system, variations in life expectancy and health outcomes remain.

In light of this, reducing health inequities and building a more equitable health system is a stated priority for the Northern Region District Health Boards. It is also recognised that there is an opportunity to improve cancer survival rates and the cancer care pathway as cancer is a major cause of health loss and is the largest cause of mortality in the region.

The factors that make up the root causes of health inequity are diverse, complex, evolving, and interdependent in nature. Due to this complexity, there is no single cancer equity data source for the region however appended to this letter are excerpts from relevant regional documents including the NRLTIP. This information provides an overview of equity, cancer services and key cancer statistics for the region.

I trust this information answers your questions.

You are entitled to seek a review of the response by the Ombudsman under section 28(3) of the Official Information Act. Information about how to make a complaint is available at www.ombudsman.parliament.nz or freephone 0800 802 602.

Please note that this response, or an edited version of this response, may be published on the Auckland DHB website.

Yours faithfully

Ailsa Claire, OBE
Chief Executive

Encl. *Attachment 1 – Summary of health outcomes for the region*
Attachment 2 – Summary of work to develop regional cancer services
Attachment 3 – cancer profile for the region

Summary of health outcomes for the Northern Region

Source: Northern Region Long Term Investment Plan

Key messages:

- Health outcomes in the Northern Region are generally better than the New Zealand average and improving as life expectancy continues to increase and mortality rates from cardiovascular disease and cancer decline.
- However, health outcomes are variable across the Region, with significant inequities and ill health linked to ethnicity and deprivation.
- We also have a significant burden of preventable ill health in the Region, with 20% of all deaths (1,800) potentially amenable through healthcare intervention.

Health outcomes are improving in general across the Region

Nine out of 10 people across our Region rate their health as 'excellent', 'very good', or 'good', and life expectancy has increased by 1.9 years over the last 10 years to 82.4[1] years. Cardiovascular disease and cancer are the two largest causes of death in the Region. Mortality rates for these diseases are slightly lower than the NZ rate and are declining (cancer mortality decreased from 137.2 to 116.5 per 100,000 over the last ten years).

There are significant inequities related to ethnicity, geography and deprivation

Despite the improvements noted above, there is still a substantial life expectancy gap for Māori and, to a lesser extent, Pacific compared to non-Māori and non-Pacific. Māori have a life expectancy eight years shorter than for non-Māori, non-Pacific people. The life expectancy of a Pacific person is (on average) 6.8 years lower than for a non-Māori, non-Pacific person.

There are also gaps in life expectancy by local board, with a gap of 7.6 years between people in the local board with the highest life expectancy (Howick, 84.9) and those in the lowest (Māngere-Ōtāhuhu, 77.3).

There are also variances in health outcomes between our DHBs, reflected in differing life expectancies and mortality rates for cancer and cardiovascular disease. Life expectancy for people in Waitemata DHB is almost four years higher than for those in Northland DHB. Northland DHB also has the second highest cancer mortality rate in the country while Waitemata DHB's and Auckland DHB's cancer mortality rates are among the lowest.

There is a burden of ill health related to amenable or preventable disease

A large burden of ill health can be avoided and can be considered potentially 'amenable' or 'preventable'. A death can be considered as potentially amenable if it could have been avoided through optimal quality healthcare. The concept of preventable deaths is broader and includes deaths which could potentially have been avoided by public health interventions focusing on wider determinants of public health, such as behaviour and lifestyle factors, socioeconomic status and environmental factors.

On average 20% of all deaths (1,800) within the Region are potentially amenable through healthcare intervention. Cardiovascular disease and cancer account for the largest number

[1] Data from 2014-16, calculated using population estimates from Statistics NZ and mortality data from the Ministry of Health Mortality Collection

of these deaths (700 and 437 respectively). This burden suggests there is more we can do to help people manage their conditions and minimise the impact of chronic disease, particularly for those who are most vulnerable.

	NDHB	WDHB	ADHB	CMH	Northern Region	NZ
Life expectancy						
Life expectancy (2014-16)	79.9	83.8	82.7	81.3	82.4	81.7
LE Gap (yrs.) - Māori cf non-Māori, non-Pacific (2014-16)	8.7	5.6	5.8	8.1	8	7.1
LE Gap - Pacific cf non-Māori, non-Pacific (2014-16)	3.3	6	7.4	6.8	6.8	5.8
LE Asian (2014-16)	84.2	89.7	86.9	86.6	87.4	87
Mortality						
Mortality (2012-14 rate per 100,000 pop)	432.8	315.9	355	393.8	361.1	384.8
Amenable mortality (2012-14 rate per 100,000 pop)	124.2	70	79	106.4	88.4	94.5
Cardiovascular mortality (2012-14 rate per 100,000 pop)	128.1	88.4	103.4	119.7	105.7	115.7
Cancer mortality (2012-14 rate per 100,000 pop)	136.8	108.7	110.7	122.9	116.5	122.8
Infant mortality two year rate per 1,000 live births (2015 and 2016)	4.1	2.6	3.7	5.4	4	3.8
Suicide (2012-14 rate per 100,000 pop)	16.1	9.2	8.7	9.8	9.7	11.4
Risk factors						
% Adults who are current smokers (2013 census)	19%	12%	11%	16%	14%	19%
% Adults overweight or obese (2011-14 Health Survey)	71%	58%	57%	68%	62%	64%
% Children overweight or obese (2011-14 Health Survey)	39%	26%	28%	40%	32%	32%

Key: Dark blue = Greatest opportunity for improvement, Light blue = Lesser opportunity for improvement.

Health status and inequity

Health outcomes and access to healthcare vary significantly across our Region, with some groups and geographies experiencing significant inequities and ill health linked to demographic and socioeconomic factors. In particular, our Māori and Pacific populations have generally lower life expectancy, and higher instances of preventable ill health, amenable mortality and ambulatory sensitive hospitalisations.

Optimising health outcomes and the quality of care in our Region will mean addressing these inequities to ensure everyone has equitable access to care and equitable health outcomes, regardless of background or where they live in the Region. Reducing inequities, maximising self-directed care and addressing preventable ill health will also help improve the value of health services because a healthier population requires less health care.

The international evidence does not provide specific solutions to address the challenges faced by the Northern Region as our vulnerable populations have unique cultural and social needs, distinct to those in other parts of the world. We have however, identified some areas where we believe there is a good case for investment (see below). Co-designing with our population will be an important part of future change that will improve health outcomes.

- Focus on population health interventions, particularly those which address risk factors and prevent disease
- Empowering patients and whānau through prevention, wellness and self-care
- Targeting proactive care to avoid illness and understand the needs of our at-risk populations
- Addressing the social determinants of health

Summary of work to develop regional cancer services

Source: Northern Region Long Term Investment Plan

The NRLIP also completed additional work to provide detail about what the Northern Region Cancer Services could look like in the future.

Northern Region Cancer Services

Cancer is a major cause of health loss and is the largest cause of mortality in the Region. There is considerable variation in cancer survival rates within the Region as well as opportunity to improve survival rates when compared to other countries such as Australia.

The Northern Region will establish an Integrated Cancer Service (NRICS) which is aligned to tumour streams and ensures that all patients in the Region receive the same standard of care regardless of where they present. The NRICS will accelerate and strengthen progress already underway within the Region. It will be responsible for the full spectrum of cancer provision including the prevention, screening, diagnosis and treatment of cancer. The standard of care will be consistent regionally, but the geography of the Region is such that the service delivery model in Northland may differ from the Metro Auckland model of delivery for some elements of care.

The NRICS will also have a strong research focus and will need to stay well abreast of the challenges and opportunities that will arise in the fast moving areas of genomics, precision medicine and new drug and diagnostic developments. This has the potential to significantly impact the delivery of our inpatient services, diagnostic services and both chemotherapy and radiotherapy delivery.

In overall terms this means we will:

- Develop a single cancer service delivered in a managed clinical network model with a lead provider/s for each tumour stream who will be accountable for the delivery of the tumour stream through the accreditation of providers across the pathway
- Ensure that patients will be at the centre of all we do, and we will engage proactively with them in the design and delivery of their care
- Ensure robust approaches are in place to support the prevention and screening of cancer
- Increase the local delivery of the high volume / low complexity elements of a tumour stream pathway and oncology within each DHB, and deliver infusion services in a number of primary and community care settings
- Invest in radiotherapy capacity in locations other than the Auckland City Hospital campus when step increases in capacity are required
- Ensure we have ready access to data and information to inform our decision making in a service where personalised medicine will increasingly become the norm, and to inform research that will enable evidence based decision making to achieve best outcomes for our population.

This does not mean that we will centralise all cancer care on a single site. Rather, we will work regionally to deliver low complexity services locally and will concentrate complex care in fewer locations where there is evidence that this will improve outcomes, or where we need to do so to ensure clinical or financial viability.

We will plan our service delivery around tumour streams with each having a lead provider that will take accountability for:

- Ensuring standards are in place that align with New Zealand tumour stream standards and international best practice. The development of these standards will be clinically led and they will be agreed regionally
- Accrediting providers against these standards and ensuring that the network of providers can demonstrate how they will meet all elements of service delivery for the population they are serving and meet any minimum thresholds included in the standards
- Facilitating multidisciplinary meetings which will be a key mechanism for ensuring that all key decision makers are included in determining the best course of treatment for patients. This will include consideration of when it is appropriate to deliver care locally and when it should be delivered by a tumour stream lead
- Delivering the majority of the complex surgical procedures, investigations and treatment services in one or multiple locations where there is evidence that improved health outcomes are achieved with scale and / or co location of other services
- Supporting the local delivery of agreed elements of service
- Ensuring participation in research
- Sponsoring the development of business cases for services change and investment in workforce, information systems, clinical equipment and facilities
- Developing a workforce plan and ensuring that all key appointments are consistent with this plan and are agreed regionally
- Monitoring performance and developing a continuous improvement plan for the tumour stream
- Delivering services within the budget parameters agreed for the service.

Consistent with international best practice, we will develop agreed standards of care and pathways across the full cancer journey. Over the next 5-10 years, the region will progressively adopt these standards. Services will increasingly be delivered by providers who can demonstrate that they are able to meet these standards, working in a networked way to ensure the cancer pathway is joined up for the patient.

While our work focused on the diagnostic and treatment elements of the pathway, we recognise that a substantial investment needs to be made in ameliorating risk factors and increasing screening and prevention if we are to address the equity gap that currently exists in the region.

We also need to further develop our palliative care services to better support our cancer patients and their whānau at the end of the cancer journey. These model of care changes and investment requirements will be considered further as we begin to implement the recommendations that have been agreed through our initial work.

Cancer profile for the Northern Region

Source: Ministry of Health, Cancer Trends: Trends in Cancer Incidence by Ethnic and Socioeconomic Group, New Zealand 1981– 2004, Nov, 2010

Cancer is the leading cause of premature mortality (mortality <75) and the second largest cause of mortality in the region (after cardiovascular disease), accounting for almost one-third of all deaths.

Burden of Disease (Cancer)

In 2014, 7,474 people were diagnosed with cancer in the Northern Region, with breast cancer being the leading tumour stream. The age-standardised registration rate for all cancer across Northern Region DHBs for 2010-2014 was 445 per 100,000 population. This varies by DHB from 441 per 100,000 in Auckland to 461 per 100,000 in Northland.

Source: Individual DHB Health Select Committee submissions for 17/18

For 2014-16, in all three metro Auckland DHBs, the top registered cancer in Māori was lung cancer and the second registered cancer in Māori was breast cancer

The following table provides the top registered cancers for the Auckland metro DHBs 2014-16 (number of registered cancers by ethnicity)

Top registered cancers by DHB for all ethnicities 14/16

Asian		**Māori**		**Pacific**		**Other**	
ADHB							
Breast	135	Lung	66	Breast	87	Melanoma	574
Lower GI	112	Breast	64	Lung	61	Breast	554
Haematological	76	Prostate	41	Prostate	60	Lower GI	539
Prostate	70	Lower GI	39	Upper GI	55	Prostate	528
Lung	68	Upper GI	36	Haematological	54	Haematological	365
CMDHB							
Breast	118	Lung	160	Breast	206	Lower GI	562
Lower GI	90	Breast	145	Haematological	113	Breast	539
Lung	85	Lower GI	79	Lung	112	Melanoma	527
Haematological	70	Upper GI	73	Upper GI	108	Prostate	525
Upper GI	60	Haematological	58	Uterine	98	Lung	386

WDHB							
Breast	138	Lung	77	Breast	75	Melanoma	961
Lung	74	Breast	67	Prostate	46	Lower GI	942
Lower GI	68	Lower GI	46	Haematological	42	Prostate	919
Haematological	61	Upper GI	41	Lung	36	Breast	871
Prostate	59	Prostate	38	Upper GI	34	Haematological	630

In 2014, lung cancer was the leading cause of cancer death, followed by upper gastro-intestinal, colorectal, breast and prostate cancers.

In 2014, 2,892 people died from cancer. The regional mortality rate of 116.5 per 100,000 (2012-14) is slightly than the NZ rate (122.8) and varies across the DHBs from 108.7 in Waitemata to 136.8 in Counties Manukau. The mortality rate has been gradually decreasing in the Northern Region as a whole and across all DHBs. In 2014 nearly two-thirds of all cancer deaths in the under 75 age group were potentially avoidable. One third were potentially amenable to healthcare intervention.

Inequities in cancer incidence and outcomes

- Māori experience a higher incidence of cancer than other ethnicities (572 per 100,000 people aged 15+ years, compared with 437 for non-Māori) (2006-2010).
- There is higher cancer staging for Māori and Pacific peoples at the time of diagnosis, with 34% having distant spread compared with 22% of European/Other patients. Research suggests that late diagnosis is the main driver of poorer outcomes.
- Māori and Pacific peoples experience higher mortality from cancer (respectively 264 and 232 per 100,000 people aged 15+ years, vs. 151 for European/Other people).
- Northland and Counties Manukau DHBs have higher mortality rates and poorer survival rates than Auckland and Waitemata DHBs, reflecting the higher deprivation levels in Northland and Counties Manukau, and the higher proportion of Maori in their populations.

Source: Northern Cancer Network Faster Cancer Treatment (May 2018)

Note: The data is mostly from the 2017 calendar year but collated for 2 years (2016-17) when presenting tumour streams by ethnicity due to small numbers.[1]

FCT 62 and 31 day indicators overall

- Except Māori (86.5%), all other ethnic groups achieved the 62 day 90% target in Northern Region; Māori cancer patients in NDHB (84.5%) and CMH (85.2%) did not meet the 90% target
- Except CMH (95.6%), the other Northern Region DHBs did not achieve the 62 day 90%target for their Pacific population
- All the Northern Region DHBs achieved the 62 day 90% target for their European and Asian populations
- Except NDHB, all other Northern Region DHBs achieve the 85% target for the 31 day indicator across all ethnic populations
- There were no inequalities for 31 day indicator across all the ethnic groups in the Northern Region DHBs

FCT 62 and 31 indicators by tumour stream

- Breast cancer - All Northern Region DHBs, except Northland DHB achieved the 62 day and 31 day target. Except Asians in Auckland DHB, the 62 day target was met by other ethnic groups when reviewed collectively as Northern Region. Except Maori, all other ethnic groups of breast cancer patients achieved the 31 day target when reviewed collectively as Northern Region. There were no significant inequalities in the 31 day indicator across the ethnic groups at DHB level
- Lung cancer – Northern Region achieved both 62 and 31 day target for lung cancer patients across all ethnic groups. 85% Maori patients compared to 92% Europeans achieved the 62 day target in CMH. Pacific lung cancer patients in WDHB and ADHB did not achieve the 62 day target. There were no inequalities for the 31 day target across all ethnic groups at DHB level
- Lower gastrointestinal cancer – Except Asians, none of the ethnic groups achieved the 90% target when reviewed collectively as Northern Region
- Approximately 81.8% Maori patients achieved the 62 day target compared to 89.2% Europeans in the N Region. All ethnic groups achieved the 31 day target when reviewed collectively as Northern Region. However, Maori patients did not achieve the target in NDHB and ADHB respectively; all other ethnic groups achieved this target at DHB level.
- Urological cancers – Except Maori, all other ethnic groups achieved the 62 day target in the Northern Region. The 62 day numbers at DHB level were very small. None of the ethnic groups achieved the 31 day target

[1] Information on the Faster Cancer Treatment (FCT) indicators 62 day and 31 day by Northern Region DHBs, tumour streams and ethnicity is included. Technical adjustments were made to the 62 day FCT indicator, a Health Target from 1st July, 2017 to allow for appropriate delays such as patient reason and clinical considerations. Data monitoring of the 62 day FCT delay codes by DHB and ethnicity is essential to ensure that there is no increase use of delay codes or they don't mask inequalities. Lastly, different routes to diagnosis of cancer were investigated from the available FCT database, particularly to review emergency presentation which is associated with poorer cancer survival.

Table 1: 62 Day Indicator – by DHB and Ethnicity, Jan – Dec 2017

	NDHB	WDHB	ADHB	CMH	N Region
Maori	84.5%	89.3%	94.7%	85.2%	86.8%
	(49/58)	(25/28)	(18/19)	(46/54)	(138/159)
Pacific	75.0%	81.8%	86.5%	95.6%	89.7%
	(3/4)	(9/11)	(32/37)	(43/45)	(87/97)
Asian	100%	97.7%	96.2%	90.0%	95.0%
	(3/3)	(42/43)	(51/53)	(36/40)	(132/139)
EU/Other	91.4%	94.6%	94.1%	94.5%	93.9%
	(160/175)	(384/406)	(190/202)	(222/235)	(956/1018)

Definition: all patients referred urgently with a high-suspicion of cancer receive their first treatment (or other management) within 62 days of the referral being received by the hospital. This is one of the six health targets.

- Except Maori, all other ethnic groups achieved the target 90% for 62 day indicator in Northern Region
- All the Northern Region DHBs achieved the 62 day target of 90% for their European and Asian populations
- In NDHB, approximately 84.5% Maori achieved the 62 day target compared to 91.4% Europeans. Considering Maori make up 25% of their 62 day volumes, this is a significant difference.
- In CMH, approximately 85.2% Maori achieved the 62 day target compared to 94.5% Europeans. Again, Maori make up 15% of the 62 day volumes.
- Except CMH, the other Northern Region DHBs did not achieve the 62 day target of 90% for their Pacific population. Approximately 81.8 %(WDHB) and 86.5% (ADHB) Pacific people achieved the 62 day target. The Pacific and Asian volumes for NDHB were very small to comment.

Table 2: 31 Day Indicator – by DHB and Ethnicity, Jan – Dec 2017

	NDHB	WDHB	ADHB	CMH	N Region
Maori	84.1%	94.4%	92.8%	89.4%	89.0%
	(190/226)	(117/124)	(90/97)	(219/245)	(616/692)
Pacific	70.0%	85.0%	92.0%	88.4%	88.3%
	(7/10)	(85/100)	(115/125)	(260/294)	(467/529)
Asian	87.5%	90.1%	91.4%	92.6%	91.3%
	(7/8)	(182/202)	(180/197)	(175/189)	(544/596)
EU/Other	83.6%	89.1%	91.3%	88.6%	88.5%
	(555/664)	(1296/1454)	(684/749)	(781/881)	(3316/3748)

Definition: all patients with a confirmed diagnosis of cancer receive their first cancer treatment (or other management) within 31 days of a decision-to-treat. The 31 day indicator target is 85%.

- Overall, the Northern region DHBs, except NDHB, achieve the 85% target for the 31 day indicator across all ethnic populations

- There were no inequalities between Māori, Pacific, Asian and European populations in the DHBs and collectively as Northern Region.
- NDHB just misses the target of 85% for this indicator but there were no inequality between Maori and European populations. Pacific and Asian volumes were small to comment.

Breast Cancer

Table3: 62 & 31 day FCT indicator for breast tumour stream by DHB & ethnicity, 2016-17

62 day	NDHB	WDHB	ADHB	CMH	N Region
Maori	78.3%	100.0%	85.7%	100.0%	89.3%
	18/23	5/5	6/7	21/21	50/56
Pacific	50.0%	100.0%	95.2%	96.4%	94.5%
	1/2	4/4	20/21	27/28	52/55
Asian	0.0%	100.0%	81.5%	90.0%	86.5%
	0/1	14/14	22/27	9/10	45/52
EU/Other	85.5%	98.3%	98.6%	98.7%	96.3%
Total	47/55	114/116	73/74	74/75	308/320

31 day	NDHB	WDHB	ADHB	CMH	N Region
Maori	72.5%	84.8%	92.3%	86.7%	81.3%
	74/102	39/46	24/26	72/83	209/257
Pacific	25.0%	89.2%	98.4%	91.0%	91.6%
	1/4	33/37	63/64	111/122	208/227
Asian	71.4%	100.0%	91.2%	94.0%	94.1%
	5/7	60/60	62/68	63/67	190/202
EU/Other	73.0%	89.9%	93.9%	84.5%	86.3%
Total	127/174	364/405	169/180	235/278	895/1037

Lung Cancer

Table4: 62 & 31 day FCT indicator for lung tumour stream by DHB & ethnicity, 2016-17

62 day	NDHB	WDHB	ADHB	CMH	N Region
Maori	91.2%	96.0%	100.0%	85.0%	91.2%
	31/34	24/25	14/14	34/40	103/113
Pacific	100.0%	81.8%	86.7%	94.7%	89.6%
	3/3	9/11	13/15	18/19	43/48
Asian		100.0%	83.3%	89.5%	90.2%
	NA	18/18	20/24	17/19	55/61
EU/Other	95.7%	93.7%	96.1%	92.2%	94.3%
	88/92	149/159	73/76	71/77	381/404

31 day	NDHB	WDHB	ADHB	CMH	N Region
Maori	95.5%	95.6%	93.5%	96.9%	95.7%
	84/88	43/45	43/46	94/97	264/276
Pacific	100.0%	100.0%	92.5%	94.2%	94.5%
	6/6	14/14	37/40	81/86	138/146
Asian		95.1%	97.8%	100.0%	97.8%
	NA	39/41	44/45	53/53	136/139
EU/Other	95.8%	96.0%	95.7%	99.0%	96.6%
	184/192	291/303	155/162	205/207	835/864